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ORIGINAL ARTICLES.

HYDATID TUMORS IN THE BRAIN.[1]

BY R. HARVEY REED, M. D.,

OF MANSFIELD, OHIO.

By the term hydatid tumors in the brain, we mean the intra-cranial occurrence of either the echinococcus or the cysticercus cellulosæ in man. The former is the embryo of the tænia echinococcus which has never been known to attain maturity except in the dog. The latter is the embryo of the tænia solium, which is most frequently found in man, the hog, and the rabbit, but not unfrequently in the dog and the common rat; and has been known to exist in the ape, the bear, and the deer.

The history of these strange parasites is only tracable to the oblivion of the unknown; before the time of Aristotle they were known to be associated with hydatid tumors, and were so regarded by Hippocrates; although it was left for Pallas to describe the echinococcus as a separate parasite, in 1766, and for Göze to observe the same of the cysticercus in 1784.

The Mosaic law, which denounced as unclean all those animals which split the hoof and did not chew the cud, or those which chew the cud and did not split the hoof, was undoubtedly based on the existence of these parasites, for it is a well-known fact that the hog, and a species of hare common in the east, were particularly rife with the disease produced by these parasites. Nor were all the animals considered clean by the Mosaic law even free from this loathsome disease; for we find, on referring to the older works on sheep husbandry, the same disease treated of, under the synonyms of "turnstick," "sturdy," and "staggers," and more recently as "hydatid polycephalis cerebrais;" which proved to be very fatal in the flocks where it prevailed, and was described as a many-headed hydatid, each of which was mounted with a disk of sharp hooklets. The development of these parasites from the tape-worm through all their multiple metamorphoses until again a tape-worm, was for a long time enshrouded in mystery; and it was not until comparatively recently that all the links in the chain were finally united.

In order that our subject proper may be better understood, we will give but a brief outline of the development of these tæniæ, which, during a certain stage of their development, may form cysts in the brain, or its membranes, of man. From Küchenmeister, the eminent German authority, we have crystalized the following:

Division A.—Tænia echinococcus. 1. Is found only in the dog, has but four joints, the last of which contains the genital organs, and also the ripe eggs. 2. When these eggs find their way into the stomach of man they migrate, as soon as germination takes place, through the system and there develop the echinococcus which first form the so-called mother, or brood cysts. 3. These mother or brood cysts may develop as follows: (*a.*) The scolices or heads, directly from the mother cysts, when they are called echinococcus scoliciparíens, and is frequently known under the name of E. veterinorum, owing to its frequent occurrence in the domestic animals, and is distinguished from the fact of its having from 28 to 36 hooklets. (*b.*) The mother cysts may develop daughter cysts or even granddaughter cysts, and from either of these latter cysts may develop the scolices, in which case they are called the E. altriciparíens, and from their frequent occurrence in man they are also known as the E. hominis, and can be distinguished by the fact of their having from 46 to 52 hooklets. (*c.*) The mother cysts may develop scolices externally, as is generally the case in animals, and from this fact they have received the name of exogens. (*d.*) Or the mother cysts may develop scolices internally, as is most frequently the case in man, when they are termed endogens. (*e.*) Lastly, the mother cysts may not develop scolices at all, when they are known as acephalocysts.

When these cysts or their scolices find their way into the stomach of the dog they develop into the tænia echinococcus; but should they find their way into the stomach of any other animal they will not reach maturity; although the embryo in the form of hydatid cysts will develop in man, as well as others of the animal kingdom, and will live in this embryonic state for years, or until it destroys the life of its host, yet it has only been known to reach maturity when eaten by the dog.

Division B.—Tænia solium. 1. It is found in man and the hog; and when matured gives off proglottides or the so-called joints, which, like the last segment of the tape-worm of the dog, contains the genital organs and the matured eggs. 2. These entire segments, or only a part of the eggs, may find their way into the stomach from which, in an embryonic state,

[1] Read in the Section of Practical Medicine, Materia Medica and Physiology, at the Thirty-Sixth Annual Meeting of the American Medical Association.

they migrate into the system, and there develop into the cysticercus cellulosæ, which passes through a series of metamorphoses similar to that of the echinococcus.

The so-called "measly" pork owes its peculiarities to the presence of these cysticerci, which, when eaten by man or other animals, will develop into a tænia solium, or tape-worm. Although we have two distinct species of tænia which give rise to hydatid tumors, and furnish a wide field for study, yet we do not think a special study of either, except so far as they interest us clinically, is within the province of this paper; and would respectfully refer those who care to look up the subject in detail, to Küchenmeister or Leuckart. From a clinical standpoint it matters but little which species is producing the intrusion on the economy, the results to the patients are the same.

It is true, as a rule, that the cysts or hydated tumors produced by the echinococcus are larger than those produced by the cysticerci, yet the latter make up for the deficiency in size by multiplicity in numbers. When hydatid tumors are opened and their contents examined with the microscope they may be found to contain complete scolices or just the scattered hooklets of broken and incomplete heads. When scolices cannot be found free in the liquid of the cyst, they may be found by examining the brood capsule, or lining membrane of the same, except in the case of acephalocysts when no scolices or isolated hooklets can be found. These hydatid tumors contain a pale straw-colored fluid which usually contains no albumen, is freely charged with chloride of sodium, and contains a liberal quantity of succinic acid, which is not unfrequently found combined with lime or soda; also, traces of grape sugar, together with other chemicals, are generally found present.

Hydated cysts of one or the other of these tænia have been found in almost all parts of the human economy, but especially in the liver, the cellular tissue, the brain, the spinal cord, the eye, the spleen, the lungs, kidney, supra-renal capsules, heart, and even in the osseous system.

Küchenmeister, who collected 88 cases of cysticercus of the brain, found the cysts 49 times in the membranes, six of which were on the dura mater, 11 on the arachnoid, 23 on the pia mater, and 9 on the choroid plexus. Fifty-nine on the surface of the cerebrum, 41 in the cortical substance, 19 in the white substance, 18 in the ventricles and aqueduct, 17 in the corpora striata and anterior commissure, 15 in the optic thalami and gray commissure, 4 in the corpora quadrigemina and the pineal gland, twice each in the trigona olfactoria, corpus callosum and medulla oblongata, once in the olivary body, and 18 times in the cerebellum. In the above, 18 per cent. were without any symptoms, in 6 they were only trifling, in 5 epilepsy alone was present, in 4 epilepsy with mental debility, in 15 epilepsy with paralytic symptoms, in 24 insanity without epilepsy, of which 7 were without motor or sensory disturbances, 17 had lameness, cramps, hemiplegia, paralysis and muscular twitchings, while out of all only 24 had epilepsy.

The size and growth of these hydatid tumors varies according to the space afforded them for development. It seems that their size depends more on the pliability of the tissues, rather than the quantity and quality of the nourishment furnished. The danger attending the presence of these hydatid tumors depends very much on their location and size. When they occur in the subcutaneous cellular tissue it is not attended with any great danger. I know of a young man who is under the care of my friend Dr. J. W. Craig, in whom they can be counted by the hundreds, notwithstanding the doctor has cut out several scores already, and yet the young man is apparently in good health. When they occur in the muscular tissue they become more and more injurious in proportion to their depth and the importance of the structures involved. Their occurrence in the anterior chamber of the eye may not occasion any grave symptoms, but when they occur in the posterior chamber, the vitreous, the retina, or under the retina, as observed by Sömmering, Schott, von Graefe, Mackenzie, Baum, Esthlin Sickel, and others, they produce the most serious trouble. When they locate themselves in the brain or its membranes, they occasion a multitude of symptoms, which are modified by their location, as will be best observed in the cases I am about to report in this paper, and which, it will be readily observed, renders the diagnosis exceedingly difficult and obscure.

CASE I.—Dr. B., æt. 46, a large, strong, hearty man, who was engaged as a traveling doctor, was taken ill in the summer of 1880; at first was easily fatigued, mentally and physically, but able to be up and around and practice his profession, which was soon followed with general malaise, which gradually grew worse until he had lost all inclination for business; this was followed by gradually increasing vertigo, could not sit upright long at a time, which became so bad as to almost disable him from walking across the room, or sitting up at all; when he attempted to walk would pitch forward on the face. As the disease grew worse he was taken with vomiting, with or without food, which assumed a reflex character. From the first there was a constant tendency for the head to drop forwards, and toward the last, when not lying down, would sit with the head dropped forward, which tendency manifested itself even when lying down. He was extremely nervous, and toward the last his appetite, which had gradually failed him from the first, failed entirely, except that he had an incessant desire to drink milk, which was immediately vomited after entering the stomach. The bowels were regular and urine normal. There was a gradually increasing stupor, with some mental aberration toward the last, which continued, together with an increase of all the other symptoms, until the patient died from collapse March 3d, 1881. The post-mortem revealed sclerosis of the gray portion of the brain, with softening in the right cerebellum and in both ventricles. In the right lateral ventricle was found a hydatid tumor the size of the first joint of a man's thumb, which was surrounded with some pus and considerable effusion.

CASE II.—J. W. K., æt. 28, a strong, hearty laborer, was taken sick in spring of 1879 with pain in the left side. No difficulty with the hearing, complained of trouble from coughing with pain in the chest; partial paralysis of right arm. In February, 1881, had a similar attack; also one in 1882, which was followed with another in December, 1883, when he commenced to have an offensive discharge from the left nostril. In May (23d), 1884, he was taken with a chill, followed with pain in the left side of the head. Had a troublesome cough of a nervous character; appetite good, which continued to the last, with no vomiting; bowels regular; no alteration of the temperature, but some nervous excitability of the pulse, which would often rise above or drop below the normal, and in a short time return to the normal again. Would often complain of a cold spot on the top or left side of his head. Was troubled at times with diplopia, and flashes of light in both eyes. Had been able to

do manual labor, however, between each of the other attacks, and even up to the commencement of this last attack, at which time he had an exaggeration of all the former symptoms excepting the paralysis; but more especially the pulmonary symptoms, which gave rise to coughing and dyspnœa. These symptoms increased until he died from general exhaustion June 1st, 1884. Assisted by Dr. J. Harvey Craig I made a post-mortem five hours after death, and found a large hydatid tumor located in the left lateral ventricle, nearly as large as a hulled white walnut. There was considerable effusion, with softening and destruction of the brain substance on the left side, and thickening of the membranes of the cerebellum and spinal cord, with here and there spots entirely destroyed by softening. An examination of the rest of the body revealed nothing of an abnormal character.

CASE III.—O. H. B., æt. 52, a strong, robust man, was accustomed to doing considerable mental and physical labor. Commenced complaining in the spring of 1882, with general debility accompanied with some dyspnœa and difficulty in deglutition, but had no trouble digesting his food after getting it swallowed; bowels were normal, and urine natural at first, but contained some albumen toward the last. Was advised to take a trip for his health, but returned feeling worse; both the asthmatic symptoms and the difficulty in swallowing were much worse. His gait became unsteady and staggering, but no paralysis, and mind clear and no tendency to spasms. These symptoms gradually became worse until the patient died of exhaustion December 30, 1883. The post-mortem showed evidence of athoromatous degeneration of the cerebral arteries, more especially those in the circle of Willis, but little effusion. Two hydatid tumors were found in the right lateral ventricle, and three in the left lateral ventricle, varying in size from a grape down to that of a pea.

CASE IV.—Mrs. McS., æt. 57, an ordinarily healthy female, had been married and raised a family, but was now a widow; had "changed life" at the age of 50. Had not been feeling well for some time, but commenced to grow worse in 1877, when she was very much debilitated; some mental aberration, among the first of which was that of imagining she smelt the fumes of a tobacco pipe. She next became contrary in almost everything, which was the more noticeable on account of her previously agreeable disposition; she imagined every person wanted to poison her. Her general lassitude increased, her gait became staggery, and she soon lost all ability to maintain the upright position, and when attempted, had a tendency to pitch forward; complained constantly of a cold spot on the top of her head. She had a constantly sick stomach, with vomiting only toward the last; a constant desire to urinate, was very thirsty and drank a great deal; had some fever at times in the latter part of her illness; toward the last the pain in the head subsided; had great difficulty in deglutition, very great dyspnœa, some paralysis on the right side. A week before she died became blind and deaf, with complete aphasia, and finally went into a comatose condition and died March 12th, 1884. The post-mortem revealed two hydatids in the right and three in the left ventricle, with marked cerebral effusion and general softening of the entire brain substance.

For the first, third and fourth cases I am indebted to my personal friend and fellow-townsman, Dr. J. W. Craig, although the writer was present at the necropsies of all excepting case No. III, but had the pleasure and profit of examining the tumors removed in that case.

In our opinion, the first and second cases were produced by the ecchinococcus, while the third and fourth were the result of the cysticercus cellulosa.

By permission I quote from a private letter received from Prof. Wm. Pepper, of the University of Pennsylvania, in which he says: "I have met with two cases, but unfortunately, the clinical records are so imperfect that I shall not publish them. The autopsies were, however, carefully performed. There was one hydatid in the retina in one case, with a cyst in the right anterior lobe of the brain. In the other the cysts were found on the left side of the base. They were both hospital cases, and no record could be obtained as to their previous history. The one is undoubted as to its character, while in the other it is believed that the cysts were hydatid from their general gross appearance."

For a number of the following synopses of interesting cases of hydatids of the brain and spinal cord, I am not only indebted to my personal friend, Dr. N. Senn, of Milwaukee, for kind assistance in collecting them, but also for their translation; also to Dr. Robert Herdegen, of Milwaukee, for his assistance in the same.

Dr. J. Klob reports two cases of cysticercus cellulosæ in the brain, in the *Vienna Weekly*, Nos. 8 and 9, 1867. The first case was that of a man aged 54, who two years previously suffered from rheumatic pains in the lower extremities. For some time gradual loss of memory. Pupils somewhat dilated; speech slow, but plain; difficulty in hearing; movements of the upper extremities slow and with effort; toward the last the patient was troubled with incontinence of urine, lower extremities paralyzed. A post-mortem examination showed the dura mater to be tense, brain swollen, left hemisphere of the brain somewhat larger than the right. On opening the left lateral ventricle, a large cyst with delicate walls escaped, which contained a clear, watery fluid. The cyst was as large as a medium-sized apple. From the under surface a pedicle of gray color was given off, to which two smaller cysts were attached. A peculiar pigment was observed, arranged symmetrically, in the centre of which were found the hooklets of the cysticercus.

The second case was a woman 43 years of age, who after intense fright suffered from severe headache, and a few days later was seized with convulsions. These convulsions appeared at short intervals, and assumed an epileptiform character. The convulsive movements affected mostly the left side of the body. On the eleventh day of illness she died, death being preceded by collapse and stupor. On post-mortem examination the dura mater was found tense. In the pia mater, over the right cerebrum, were found chalky nodules, which were identified as cysticerci which had undergone calcification. On the lateral surface two recent cysticerci were found. In the posterior portion of the right side of the brain a closed cavity the size of a walnut was found, which communicated with another cavity the size of a pea by a narrow channel. At the point where both of these cavities joined was found a calcified cysticercus.

Drs. W. and G. Morkle report a case of cysticercus cellulosa in the cerebellum in the German Archives of Clinical Medicine, vol. iii, p. 297, in which the patient was a strong boy of 13, who was taken ill with severe pain and stiffness of extensor muscles of the neck, which abated slowly and imperfectly. After a few months, severe attacks of headache were complained of, which were accompanied at times by vomiting. These severe attacks were succeeded by sleep resembling stupor. Death occurred suddenly. The post-mortem revealed in the left lobe of the cerebellum a tumor the size of a hazel-nut, with a resistant yellow nucleus. The entire white substance of the cerebellum was softened and gelatinous. The

swelling was surrounded by a layer of pus 1 mm. in thickness. The tumor consisted of a cyst, which contained detritus, in the centre of which a well preserved cysticercus was found.

A similar case is reported by G. Markle, in the person of a boy 10½ years old, previously in robust health, who was taken ill with headache and vomiting. In one of these attacks of headache he became restless and delirious, which was followed by unconsciousness, stupor and death. At the necropsy, a cyst the size of a cherry was found in the infundibulum, which proved to be a cysticercus cellulosa. The gyri of the brain were flattened, the consistency of the white substance was firm.

Dr. Marks, in writing of the echinococcus in the brain (Virchow in Hirsch's yearly report, 1873, vol. I, p. 640) reports a case of echinococcus in the brain which is of interest on account of its location in the left temporal lobe of the brain. The patient, who was 40 years of age, had had an attack of dizziness during the month of December, 1871. In July, 1873, he was seized with another attack, which was followed with facial paralysis of the right side, complete paralysis of the left upper extremity, partial paralysis of the left lower extremity. Sensation in both right arm and leg diminished. His condition both mentally and physically gradually became worse, especially the aphasia. He at last passed into a stupor, had incontinence of urine, followed by death. The autopsy showed great tensity of the dura mater, the convolutions of the cerebrum were flattened, but more on the left than on the right side. On the outer side of the left temporal lobe a green discolored spot the size of a dollar was found, below which, at the depth of 2 mm., an echinococcus cyst the size of a fist was found, which contained a clear fluid. The cyst could be removed with ease from the substance of the brain. The right half of the pons was flattened, while the remaining portions of the brain were not materially changed.

Griesinger, who has collected over 70 cases of these parasitic affections of the brain, 54 of which he describes minutely, 21 of which were his own cases, found their occurrence in the spine very rare, of which Dr. Otto Hebald reports two very interesting cases, which are recorded in vol. XV, No. 3, p. 812, of the *Archiv für Psychiatrie*, Berlin, 1884; for the translation of this, from which I only give a synopsis, I am indebted to Dr. Henry Ruess, of Mansfield, Ohio:

The first patient was an idiotic female, aged 63, of healthy parentage, but who had an idiotic half-sister. Early in life she became hysterical. Seven years ago was troubled with hallucinations, a year later was taken with epileptic convulsions, which occurred frequently, together with vomiting, two years later became blind, with partial paralysis, and perverted sensibility, difficult articulation, general depression, followed by death. The autopsy revealed cysticerci under the pia mater of the spine and brain, also in the cortex of the latter. One was found free in the lateral ventricle, also one in the muscle of the heart, and under the pleura costalis.

In the same article he reports another case which occurred in a female aged 65, who was of an irritable disposition, especially during the menstrual period, who was taken ill in 1876, showing signs of brain irritation, with hallucinations in hearing. At times had attacks of religious exaltations, at others tore her hair, and at times was very destructive. After being removed into the asylum her symptoms grew worse, would inflict injuries upon herself and others; she was exceedingly filthy, would eat her own and others' fæces. In 1877, symptoms of pressure on the brain, with epileptic attacks, with unconsciousness, had vomiting of green matter, slight paralytic symptoms in the right upper extremity. Her condition, with occasional short improvements, gradually grew worse, which was attended with difficult articulation. In 1879 partial and total blindness set in; from that time to 1881 and 1882 paralysis of lower extremities; toward the last, in 1883, had to be carried around. Epileptic attacks preceded her death, which occurred in the summer of 1883. The autopsy revealed cysticercus the whole extent of the dura spinalis as high as the first dorsal vertebra, also over the right anterior and lateral division of the medulla. Marked adhesions of the dura to the cranium. Scattered under the membranes and over the brain in both lateral ventricles were cysts of the cysticerci from the size of a pea to that of a bean, which were filled with a clear yellowish liquid. Also in the right posterior wall of the chest, under the pleura, were found four cysts about the size of a bean, also one under the left pleura costalis. The writer observed that only those in the ventricles were well developed, the rest were imperfectly developed, and that those in the substance of the brain were smaller, and had a tougher capsule. A few reached into the white substance of the brain, but not a single one was found there alone; the majority being in the cortical substance of the brain, in different parts of it. After making a careful analysis, the author arrives at the conclusion that the case was primarily one of insanity, which led to the eating of fæces, by which she became infected with the cysticerci, which developed a new train of symptoms still later, which subsequently produced death.

Ulrich, in abstract in Virchow, 1872, No. 2, p. 16, reports a case of cysticercus in the brain and spine both, in an insane person. Regarding this case, he says the insanity was not caused by the cysticercus, but the cysticercus was the result of the extremely filthy habits of the person.

Yates—abstract in Virchow, 1870, No. 2, p. 60, reports a case of a young man who died at the age of 21, who was under his care for two years previous to his death, and complained of headache, weakness of legs, hemiplegia, light delirium and stupor, followed by death. Autopsy revealed a hydatid tumor the size of an ostrich egg in the left hemisphere of the cerebrum. The patient died suddenly, but notwithstanding his stupidity, he was able to answer questions intelligently up to the time of his death.

Sutherland—in Virchow, 1873, No. 2, p. 67, reports the occurrence of an echinococcus between the chiasm and pons, with compression of the two oculomotors, and destruction of the ventricles. His symp-

toms were intense headache, frequent vomiting, tinnitus aurium, deafness, and impaired vision.

Schlott—in Virchow, 1873, No. 2, p. 68, reports a case occurring in a former soldier, who took sick with frequent fits of giddiness, headache, nausea, and heaviness of his limbs, tongue blue and swollen, oscillations before the eyes, diplopia, staggering gait. His bodily and mental capabilities grew weaker, first vomiting and regurgitation, afterward would swallow with great avidity. Spontaneous discharge of fæces and urine, his language became stammering, choreic movements, subsultus tendinum, and finally died with pulmonary œdema. The autopsy revealed numberless cysticerci, from the size of a pin-head to that of a pea, in the dura over the base of the brain, as well as in the dura of the cerebrum, in the substance of the cerebrum and cerebellum, and also on the surface of the same, and in the ventricles and in the great ganglions, besides, they were even found in the muscles throughout the body.

Westphal—in Virchow, 1873, vol. 2, p. 68, reports an interesting case, with recovery, of echinococcus observed in the Charité, in Berlin, in a young man aged 17. The symptoms were headache, nausea, right exophthalmus, and protrusion of the right temporal bone, hemiplegia on the left side. These symptoms came on step by step, with exacerbations and remissions. The protrusion of the right parietal region became large, extending to the vertex. In four weeks after he entered the hospital, by the finger one could feel a perforation of the bone about an inch above the outer angle of the right eye, four days later there was another perforation near the first one. By and by, from these openings a fluctuating tumor appeared under the skin, and the tumor was diagnosticated echinococcus. An exploratory puncture failed, and an incision was made, which soon discharged about ninety cysts. Ten days later, by blowing his nose there came out of the left nostril a large and two smaller cysts. When the patient left the hospital a few weeks later, he was free from headache and hemiplegia, but the circumference of the right side was three inches larger than the left, and the exophthalmus still continued, with blindness. The openings in the bones still existed, the pulse varied from 90 to 150, with a normal temperature.

Eichorst, vol. II, page 708, says the echinococcus usually consists of but one cyst, seldom multiple, but in the case of Espinosa there were 52 cysts under the arachnoid membrane.

The frequency of this disease depends on at least three factors: 1, The prevalence of making dogs household pets, as in Iceland, where it is estimated by some writers that at least one-tenth of the population suffer from echinococci, which is undoubtedly due to this cause. 2, The eating of half-cooked "measly pork," which gives rise to numerous tapeworms, and they in turn to the cysticerci. 3, The filthy habits of many, together with the increase of population, which necessitates the close commingling of all classes.

Hydatid tumors are found to be more frequent in old persons than in young persons, although they may occur at any age, and are more apt to be found among the poorer members of the population than among those in affluent circumstances, but sex does not appear to make any difference as to their frequency. The tape-worm and its embryo may exist in the same person at the same time, or a tape-worm and the ecchinococcus may exist in the same subject at the same time, but a tænia ecchinococcus and its embryo never has been known to exist in man at the same time. The prognosis in this disease as a rule is unfavorable when it is intra-cranial; only a few such cases of recovery are on record.

The treatment of these cases is also very unsatisfactory so far as therapeutic remedies are concerned. The salts of mercury and iodide of potassium have been, however, liberally used, with a view of destroying them by their antiparasitic effects, as well as for their alterative virtues. Tr. of kamala, in doses of from 30 to 40 drops three times a day, has been used freely with some reputation for good. Electricity has filled its place in the catalogue of remedies used in this malady with a questionable reputation.

When accessible the most positive benefits are derived from surgical interference, by which the cysts are emptied, by laying them open with the bistory; and now that surgeons are beginning to deal with the brain, as with other parts of the human economy, and more and more liberties are taken with it annually, it is hoped that sufferers from this dreadful disease may find a source of relief ere long at the hands of the skillful surgeon.

Although this disease, except in Iceland, is comparatively rare, and perhaps more so in America than in continental Europe, yet Dr. Osler states, in regard to the echinococcus disease in America, that he has collected from various sources 61 cases. (See transactions of Canada Med. Association, 1882, p. 354.)

With the steady increase of our population, unless active preventive measures are inaugurated we must expect a corresponding increase in this disease, which will steal in on us as a thief in the night, and cause many a premature death, unless we remove the causes which favor its production and development, viz: Dogs as household pets, the use of half-cooked unhealthy pork, together with all general unsanitary surroundings.

April 20th, 1885.

HOW SOON AFTER EXPOSURE TO SEPSIS MAY THE ACCOUCHEUR RESUME PRACTICE?[1]

BY GEO. F. FRENCH, A.M., M.D.,

OF MINNEAPOLIS, MINN.

The term puerperal fever embraces a group of essentially diverse affections, some of which are, unquestionably, non-contagious; the septicæmic variety of the disease is that which alone engages us in this discussion. An estimate of its gravity may be deduced from the statement of Barker that since 1740 there have been more than two hundred epidemics of this disease. This fact sufficiently emphasizes its prevalence; and the mortality attending

[1]Read in the Section on Obstetrics and Gynecology, at the thirty-sixth Annual Meeting of the American Medical Association.

many of these epidemics stamps the disease as a scourge scarcely less terrible than cholera or small-pox. It is most humiliating, in view of the fact that puerperal fever is largely a preventable disease, caused too often by criminal negligence on the part of physician or nurse.

It is frequently urged that our science is not an exact one; but it seems to me the evidence that this fever may be caused by the contagia of erysipelas, scarlet fever and septic dirt, is as demonstrable as any proposition of Euclid. It is now more than thirty years since Semmelweiss proclaimed to the profession that "one source of puerperal fever is decomposing organic matter." There is scarcely a hamlet in the land where instances of fatal puerperal infection have not been known, by the profession, to be traceable to avoidable sources; and there are few of us who have done service for a score of years, who have not been cognizant of such cases, which intelligent and conscientious vigilance might have prevented. And yet I have heard of no one imitating the example of the conscientious Michalis, who expiated his offence with his life. If death be the penalty of homicidal ignorance, what shall it be for criminal carelessness? In the whirl of crowded professional work, some plead lack of opportunity to carry out the tedious and painstaking details of the disinfecting process; but how valid would such excuse appear in the case of wife or sister, or in the eye of the law? The great Simon sententiously remarks: "Contagia are perhaps the most important of all the incidental physical influences which concern mankind;" and Hebra says the discovery of Semmelweiss as to the chief source of puerperal fever, ranks in importance with that of Jenner.

In order to obtain all possible light on the duty of the practitioner to the obstetric patient, I addressed in October last letters of inquiry to some of the most distinguished medical men in this country and in Europe, of which the following is the substance: "How soon after exposure to sepsis may the accoucheur resume practice? My purpose is to controvert the opinion which obtains in the profession, that *time* is an essential element in the cleansing process. I have had an experience which emboldens me to make abdominal section on the day following exposure. I greatly desire to know whether your experience warrants me in pursuing and advocating such a course."

In reply the following communications were received. I omit all portions purely personal.

In my opinion, the element of time *is* essential.

HENRY SAVAGE.

Samaritan Free Hospital for Women and Children, London, November 3, 1884.

In reply to yours of October 16, I beg to inform you that I consider time an all-essential element in the cleansing process.

The fixing of any definite limit is a difficult one, both for abdominal surgery and midwifery. Our Samaritan Hospital rule is a week, and certainly I think that this is short enough. "An experience" is of course valueless. The general experience is the only guide. I do not think the profession generally sufficiently careful on this point, or sufficiently alive to the extreme danger of neglect. J. KNOWSLEY THORNTON.

London, November 28, 1884.

From Freiberg, November 6, 1884, HEGAR writes:

The question laid before me is difficult to answer. Proof is not exact as to how the septic germ behaves with reference to heat, light and disinfection. From a purely theoretical standpoint, the question cannot be answered: so far as concerns experience, opinions differ. The one observes we should avoid for some time operations where infection is easily communicated; the other thinks we can perfectly cleanse ourselves. Moreover, the last give tedious directions as to the disinfecting.

I dare not decide between them, whether a perfect cleansing is possible or not. In my experience, it is difficult; one must be extremely careful. I think that in general we shall do well to avoid for two or three days operations in which the danger of infection is very great, as in laparotomies. That with the avoidance careful cleansing is not unnecessary, is understood. Were I or a relative to undergo an operation, I should, *ceteris paribus*, choose the surgeon who, for several days, had had nothing to do with septic material.

The foregoing opinions, differing widely from my own, certainly carry with them the weight of high authority.

Let us consider some of the notions regarding contagion which once prevailed, and compare them with opinions now held. A century ago, a belief obtained even among the *savants* of the profession, in what was called a lousy distemper, supposed to be spontaneously generated in the body by cachexia or bad humors (Fuchs). Devergie held that innutrition led to the development of lice. According to Husemann, the emperor Arnulf's death, and that of one of the Danish kings, was ascribed to the lousy distemper. Colonies of such vermin, in macroscopic legions, were believed to be entrenched under the skin so that it was impossible to dislodge or exterminate them. It was manifestly ineffective to destroy by disinfectants those on the surface, because in a few hours their place was supplied by fresh eruptions from within. These ideas have been succeeded in the profession by vague fancies that are the legitimate offspring of these superstitions. There is a dread of some supernatural presence, alike invisible and invincible.

When for years puerperal fever hovered like a spectre over the practice of Dr. Rutter, and neither art could cleanse him nor science explain the nature of his leprous influence, Dr. Meigs reverently observed that he was "merely unhappy in meeting with such accidents through God's providence." So long as a disease is controlled by an unknown power, it is formidable; as soon as it is traceable to natural causes, it is shorn of its terrors. Dr. Rutter, as an object of superstitious fear, was a plague-stricken spot in the profession, but as a simple case of ozœna, he was no longer an object of consternation.

The present weight of evidence goes to show that the *materies morbi* of contagion, whether living or dead, is a non-gaseous particle, capable of being acted upon and demonstrably susceptible of destruction. Its material nature makes it amenable to material and human influences. Several kinds of contagia have been isolated, and their property of self-multiplication demonstrated. It has been exactly determined how such contagia are affected by chemical and various other agents. The longevity of the bacillus is not to be determined by the duration of its individual life, but by the fact of its infinite multiplication and the unending existence of the organism

through its spores. I am told that Pasteur has spores which have been preserved twenty years. Clinically this has been too frequently illustrated by repeated outbreaks in non-disinfected houses of diseases like diphtheria and scarlet fever, after long intervals. Murchison and Richardson report cases where disease had become so fixed in certain houses, that succeeding families and tenants were attacked, though many months intervened between the various occupancies. Hildenbrand's coat, according to Professor Louis Thomas, "retained its contagion for a year and six months." The tenacity of life of certain forms of contagia is expressed and emphasized by the opinions of those who believe that they cannot be immediately destroyed by any known means. Experiments by Arloing, Thomas, Koch and Sternberg, show that the resting spores of the bacilli are the most difficult of all forms of life to destroy; requiring a solution of corrosive sublimate 1–5000, while ordinary spores are killed by a solution of 1–20000. Steam or boiling water kills all bacteria and spores in ten or fifteen minutes. Filth, undergoing putrefactive or fermentative change, is most conducive to the spread of infectious diseases.

Particles of contagion most often find lodgement on our hands, and particularly under the finger-nails. It is always possible after the ordinary use of the nail-brush or knife, to remove particles of dirt, in which the microscope reveals living germs of possible infection. On this account, I cut the nails short, and swab under them with a blunt instrument covered with cloth, and wet with some disinfecting liquid. I formerly used for this purpose, a 5 per cent. solution of carbolic acid; but this made the sensitive flesh crack and pull away from the nails; I now use instead, corrosive sublimate solution 1:2000.—The 5 per cent. solution of carbolic acid, even in washing the hands, causes them to crack and chap so as to be an open source of infection to the operator. Before I adopted the swabbing under the nails, I covered the interspace with collodion, the use of which I now reserve for hang-nails, cracks and abrasions. All instruments are kept scrupulously clean as well as disinfected, and the nurse is regarded as one of the instruments.

Time is essential so far as it is requisite to make the cleansing process thorough and complete, but time alone is important to effect anything. To me, the most impressive contribution to the study of this subject, the most practical in method and most telling in results, was a paper in a June, 1880, number of the *Centralblatt für Chirurgie*, by Volkmann:—"May a surgeon or obstetrician undertake post-mortem examinations?" Beside the usual method of cleansing the hands, he guards against infectious emanations from the clothing, by wearing a fresh linen coat. Spectators at laparotomies are furnished with similar coats, and instead of being asked whether they have been attending erysipelas, etc., and thrown on their honor, they are disinfected in an adjoining room, under the supervision of an assistant. Cleanliness is a trait of personal character, and it is as impossible for some men to be absolutely clean, as it is for them to be orderly or systematic. Such physicians are disqualified for ovariotomy, or even obstetric work.

To show my confidence in the possibility of immediate absolute disinfection, I made the following experiments:

June 21, 1884, after laying open a dissecting abcess of the thigh in a pyæmic patient, and stripping the limbs with both hands, till they were offensively drenched with pus, I scrupulously disinfected myself, and three hours later, attended Mrs. M. in confinement.

July 22, 1884.—In dealing with a case of pyonephrosis, before penetrating the kidney, I came upon a foul perinephritic abscess; passing through this, the kidney was sought, incised, explored and its grumous contents scouped out with the finger. The hand was so long engaged in this work, that a more complete purulent saturation could hardly be conceived. In the afternoon of the same day I confined the wife of a physician, after stating to him the full extent of my morning exposure. In both of these cases, the convalescence was perfectly normal.

February 11.—I purposely infected my index finger with the ichor of erysipelas, and after a corrosive sublimate wash, inserted it into a fresh wound, from which I had just excised a tumor. I might indefinitely multiply instances of this kind. But I will present opinions which to my mind, are *ex cathedrâ*.

I have done what you have done, without bad consequences, and I fully agree with you in your conclusions.

WM. GOODELL.

Philadelphia, October 25, 1884.

In our pure atmosphere, I have never declined obstetric work on account of septic exposure, and have never had an accident.

ROBERT BATTEY.

Rome, Ga., October 3, 1885.

I have done no obstetric practice in twenty years, but judging from a surgical stand-point, I would say that the interval might be a short one, after the free use of soap and water, the nail-brush and a change of clothing. T. A. EMMET.

89 Madison avenue, New York, February 25, 1885.

I quite agree with your premises. Time, is an uncertain, and may be, a dangerous factor to place trust in. I do not question the wisdom of general rules of Hospital practice, and until we know something of the real sources of danger, it was wise to make time a consideration. I think now our general knowledge of the particular *materies morbi*, quite sufficient to allow the intelligent *believer* to so care for himself, that he may safely be able to operate as you have done. I am not aware that I have infected an individual since I made a careful study of the subject.

HENRY O. MARCY.

Boston, December 6, 1884.

Most of us recall the memorable paper of Prof. Thomas, read in December, 1883, before the New York Academy of Medicine, in which he describes his method of disinfecting himself, in the the short interval, between a case of puerperal septicæmia and a Tait's operation. Physicians from Main to California were interested in that particular operation. Dr. Thomas subsequently informed me, that the patient recovered without a bad symptom.

The following letter is from Prof. Martin, of Berlin, dated December 7, 1884:

According to my experience, we are able to disinfect ourselves sufficiently, so that we can resume practice very soon after an exposure to sepsis. The chief question is, What are the best means of disinfection? For the entire body, a lotion of corro-

sive sublimate 1–10000, for the hands, 1–1000. This has been my custom when I have been obliged to make an abdominal section the day following exposure to septic infection. I believe that a night's rest in bed, is an important adjuvant. My friend, Dr. Carl Ruge, on two occasions, was summoned from an autopsy to the bedside of a parturiant, and under protest, introduced his hand into the uterus. He had cleansed his hands with corrosive sublimate, and no evil results followed. The untorn uterus, even when puerperal, is not so susceptible to septic infection as the peritoneum, which should not be touched until there has been a general ablution both with soap and corrosive sublimate. The great question is, Who is able to disinfect properly? And the answer to this question is quite an individual matter.

Dr. Carl Schröder writes, under date of December 4, 1884:

In my opinion, withdrawal from practice is not necessary, but can be resumed after a thorough cleansing.

Prof. Nussbaum writes from Munich, November 8, 1884:

I have very often made ovariotomies with the best results, the day after a post-mortem, but I have always made a thorough disinfection of my hands, and changed my clothes.

GEHEIMRATH VON NUSSBAUM.

At the beginning of this paper, I referred to the noteworthy publication of Prof. Volkmann in the *Centralblatt für Chirurgie* of 1880. In his letter to me, dated Halle, December 5, 1884, he says:

I hold the same views to-day as at that time. A surgeon who *disinfects* himself *well*, can immediately after making a post-mortem examination, or dressing a septic wound, undertake a laparotomy, do a trepanning, examine a patient with a fresh complicating fever, or dress a penetrating wound of the joint. Every morning from six to eight, during the summer, I am obliged to give the students operations on the cadaver, and from ten to three, I am busy in the Hospital operating and dressing wounds; and I have never yet infected a patient. In the winter, I have no operations on the cadaver to make. Comparing my results in the clinic, I can assure you, that the mortality in summer is not greater than in winter.

RICHARD VOLKMANN.

In conclusion, I present the following characteristic reply, which epitomizes the subject under discussion:

If you have *thoroughly* disinfected yourself, you can immediately enter upon obstetric practice. *Time* does not destroy septic dirt. ESMARCH.

Kiel, December 5, 1884.

GEOGRAPHICAL PATHOLOGY OF CONSUMPTION.[1]

BY G. W. McCASKEY, A.M., M.D.,

PROFESSOR OF DISEASES OF THE THROAT AND CHEST, FT. WAYNE COLLEGE OF MEDICINE, FT. WAYNE, IND.

I.

The deaths from consumption in the United States, in the year 1880, numbered 91,551, almost one-eighth the entire mortality from all causes. This pregnant fact seems to furnish at once an incentive and excuse for the following endeavor to ascertain what definite relation there is, if any such exists, between this disease and certain climatic conditions in the United States.

An obstacle is encountered at the very threshold of the inquiry in our defective system of registration. It must be admitted, in the first place, that many cases reported as consumption have no relation to that disease. It is also well known that many cases are not reported at all. The migratory character of a considerable body of the population—especially its westward flow—is also a disturbing element in a statistical study. And, finally, those regions, the climates of which have secured the reputation of being curative of consumption, have their death-rate from this disease greatly increased by the immigration of a large number of the rapidly fatal type of cases. The last-named source of error can not be removed, as there are no available records of its extent. It is only found, however, in a small number of localities; and if it could be entirely removed the only effect, so far as the present study is concerned, would be to increase the force of the conclusions drawn. After recognizing its existence, therefore, it may safely be dismissed.

So far as the other sources of error are concerned, while their existence is to be deplored, they will not impair deductions made from data which need only be comparatively correct. Indeed, for purposes of comparison the absolute death-rate is quite unnecessary. The death-rates of different localities might just as well be expressed in units, taking as an arbitrary standard either the highest or lowest death-rate found in any given locality, the mean death-rate between these two extremes, or the average of all. There is little doubt that the census report gives data which are at least relatively correct, and which can therefore be relied upon for the purposes of a comparative study. The area of the United States is too vast and complicated for detailed analysis within the intended scope of this paper. By a general survey, however, certain broad facts may be collated, and certain inferences drawn, which may not be without value.

A basis for comparison, at once practical and scientific, is readily formed by placing side by side (1), the mortality from consumption; (2), the mortality from all causes; and (3), the percentage of the former to the latter. These data will be ascertained for the United States, for groups of States, for individual States, and, in some instances, for parts of States. Notwithstanding the wide variations found in different parts of these extensive regions, each has its average of annual rain fall, of elevation, of mean annual temperature, and the like, which, taken together, or perhaps singly, are entirely characteristic of itself. These distinctions are broad enough to completely overshadow local anomalies, even if these did not, in accordance with a well recognized law, correct one another by mutual antagonisms.

With the exception of four states (California, Florida, Louisiana and Pennsylvania) and three territories (Arizona, Nevada and Montana), the death-rate from all causes was larger in 1880 than in 1870. The result of this increase upon the part of the individual states is to raise the death-rate of the United States from 13.3 per 1,000 in 1870 to 15.1 in 1880, an increase of 13½ per cent. Curiously contrasting with this fact, the death-rate from consumption either shows no change or a slight increase in all except

[1] Read before the Indiana State Medical Association.

fifteen of the states and territories. The average for the United States, which shows no change whatever, remaining 1.8 per 1,000 for each year, only illustrates and confirms the remark that the local variations neutralize one another, thus making no change in the general result.

The following table has been compiled from the census reports for 1870 and 1880.

TABLE I.

Showing death-rate (1) from all causes, (2) from consumption, and (3) percentage of latter to former:

	Deaths per 1000 of Popular'n.		Deaths from Consumption per 1000 of Popular'n.		Percentage of Deaths from Consumption to all Deaths	
	1870	1880	1870	1880	1870	1880
UNITED STATES	13.3	15.1	1.8	1.8	14.1	12.1
Alabama	10.8	14.2	.76	1.4	7.0	9.0
Arizona	26.1	7.2	0.1	.4	.4	6.9
Arkansas	12.6	18.4	.9	1.2	7.0	6.4
California	16.1	13.4	2.2	2.2	13.8	15.6
Colorado	9.4	13.1	0.8	1.1	8.5	8.2
Connecticut	12.6	14.7	2.3	2.2	17.9	15.2
Dakota	7.1	9.6	.9	.8	12.8	8.9
Delaware	12.5	15.1	2.4	2.4	18.9	11.1
District of Columbia	15.3	24.5	3.4	4.4	21.9	19.0
Florida	12.1	11.7	0.7	1.0	5.7	8.0
Georgia	11.5	13.9	0.7	1.1	6.4	8.0
Idaho	3.3	9.1	0.3	0.7	10.0	6.1
Illinois	13.3	14.5	1.4	1.5	10.8	13.3
Indiana	10.5	15.7	1.7	2.0	15.5	12.7
Iowa	8.1	11.9	1.1	1.2	13.7	9.9
Kansas	12.5	15.2	1.1	1.1	9.0	7.3
Kentucky	10.9	14.4	1.9	2.3	17.4	15.7
Lousiana	20.0	15.4	1.9	1.6	9.7	10.7
Maine	13.3	14.8	3.2	2.8	25.6	19.2
Maryland	12.4	18.1	2.1	2.5	17.2	14.1
Massachusetts	17.7	18.5	3.5	2.9	19.9	15.7
Michigan	9.4	12.0	1.6	1.6	16.4	13.2
Minnesota	8.0	11.6	1.0	1.1	13.0	9.4
Mississippi	11.1	12.9	.8	1.1	7.6	8.2
Missouri	16.3	16.9	1.6	1.7	9.7	9.1
Montana	9.0	8.0	.8	.5	9.2	5.4
Nebraska	8.1	13.1	.7	.9	8.7	7.0
Nevada	14.5	11.7	.7	1.0	4.8	8.4
New Hampshire	13.5	16.1	3.0	2.5	22.2	15.7
New Jersey	11.7	16.3	2.0	2.3	17.2	14.2
New Mexico	12.8	20.3	.5	.4	3.8	2.5
New York	15.8	17.4	2.6	2.5	16.7	14.6
North Carolina	9.8	15.4	1.1	1.5	11.7	9.1
Ohio	11.1	13.3	2.0	1.9	17.7	13.9
Oregon	6.9	10.7	1.2	1.3	18.0	12.1
Pennsylvania	14.9	10.2	2.1	1.9	14.2	12.6
Rhode Island	12.6	17.0	2.5	2.4	20.1	14.7
South Carolina	10.5	15.8	.9	1.6	8.9	9.1
Tennessee	11.3	16.8	1.9	2.4	16.7	14.5
Texas	13.7	15.5	.8	1.0	5.9	6.6
Utah	10.3	16.7	.7	.5	7.1	2.9
Vermont	10.7	15.1	2.2	2.4	20.2	16.0
Virginia	12.4	16.3	1.7	2.0	13.8	12.1
Washington	9.3	10.5	1.5	1.3	15.7	13.2
West Virginia	9.1	11.9	1.6	1.6	17.6	13.1
Wisconsin	9.4	12.1	1.2	1.3	13.2	10.5
Wyoming	8.1	9.1	.4	.3	5.4	2.6

The well-known prevalence of the disease in New England, and its rarity in the south Atlantic and Gulf coast states, becomes at once apparent. It is also observed that, with numerous undulations, it is somewhat evenly distributed over the remaining states east of the 95th meridian. In the vast region west of this meridian, comprising more than one-half the territory of the United States, and about one-fifteenth of its population, it is, with the exception of a portion of California (Texas is included in another division), even less prevalent than in the south Atlantic and Gulf coast states.

The division into groups indicated by the following table is intended to throw together adjacent states which have something in common regarding their consumption death-rate, with the view of studying some of their more important climatic conditions for the purpose above mentioned. The boundary line between these different regions, to be absolutely correct, would often, or perhaps generally, intersect the different border states. The difficulties in the way of securing statistical data for parts of states were so great, however, as to render such a division impracticable. The number of these groups, furthermore, could have been indefinitely increased, often comprising a few counties instead of several states. This could only have led to confusion, and been utterly barren of results.

TABLE II.

Showing death-rate (1) from all causes, (2) from consumption, and (3) percentage of latter to former in groups of States:[1]

	Deaths per 1000 of Population from all causes.		Deaths per 1000 of Population from Consumption		Percentage of Deaths from Cons'n to Deaths fr. all causes.	
	1870	1880	1870	1880	1870	1880
New England States	14.6	16.7	3.0	2.6	20.8	16.1
Middle States	14.9	16.2	2.4	2.2	15.8	13.8
S. Atlantic and Gulf States	12.2	14.6	1.0	1.3	8.1	8.8
Interior and Lake States	11.5	14.6	1.6	1.8	14.2	12.0
States and Territories W. of 95th Meridian, except Texas and California	10.8	13.8	0.9	1.0	8.5	7.1
California	16.1	13.4	2.2	2.2	13.8	15.6

Having marked out the different regions for individual study, and noted the high mortality from consumption in the New England and Middle states, and the low mortality in the south Atlantic and Gulf states, and the western half of the continent, it now remains to study the climatic conditions of each group in their bearings upon this disease.

Temperature.—Temperature may first be considered, as one of the most prominent factors in that combination of conditions called "climate." The mean annual temperature will be taken as the standard of comparison. In making estimates of the mean annual temperature of a group of states, it should be constantly born in mind, that they are only the averages of more or less widely diverging extremes. The same caution is necessary in considering the like estimates of annual rain-fall, and altitude which are to follow. As absolute measurements, they are not reliable; as comparative statements—and it is for purposes of comparison only that they are introduced—they are believed to be approximately correct. A glance at the isothermal, isohyetal, and hypsometric charts, especially the first two, will illustrate in a very forcible manner, the difficulties encountered. Taking the entire Atlantic and Gulf Coast line, we find a very marked decrease in its consumption death rate as the mean annual temper-

[1]The New England and Middle states were assigned positions as separate groups, partly because of their long recognized geographical unity, and partly because there were no apparent reasons for uniting the two groups or subdividing either. The third group includes the remaining states of the Atlantic and Gulf coast. The group of states lying wholly, or principally, east of the 95th meridian, *and not included in the first three groups*, have been designated the "Interior and Lake states." A fifth group comprises the remaining states and territories, with the exception of California, which, on account of the very high death-rate of a portion of the state, is assigned a position as a distinct region by itself.

ature rises. This is shown in a general way by the individual states, but more distinctly by comparing the groups into which these states have been divided for the purpose of this inquiry. Commencing with the New England States, we find a mean annual temperature of 40 to 48 degrees Fahr., with a consumption death rate of 2.6 to 3.0 per thousand of the population, or 16.1 to 20.8 per cent of all deaths. Passing down to the Middle States, we find that the mean annual temperature rises about four degrees—44 to 52 degrees Fahr.; the consumption death rate falling to from 2.2 to 2.4 per thousand, or 13.8 to 15.8 per cent of the deaths from all causes. This change is not due to any decrease in the general mortality, for this remains practically the same as in the New England States; being .3 greater in 1870, and .5 less in 1880. Still farther down (South Atlantic States), the mean annual temperature rises to from 60 to 76 degrees Fahr., and the consumption death-rate falls to from 1. to 1.3 per one thousand, or 8.1 to 8.8 per cent of all deaths. Here again the decrease in the consumption death-rate is out of all proportion to the decrease in the general death-rate —the former being 41 and the latter 10 per cent. Southern Louisiana presents a notable departure from this average, by showing a very large mortality from consumption.

On the contrary, when we compare the Interior and Lake states as far west as Kansas and Nebraska in different latitudes under the same meridian, we find a general increase in the consumption death-rate as we pass from North to South. Taking the states traversed by the 85th meridian, the death-rates per one thousand of the population for 1880, were as follows: Michigan, 1.6; Indiana, 2.0; (Ohio by its side 1.9); Kentucky, 2.3; and Tennessee 2.5. In 1870, however, no difference was reported between Kentucky and Tennessee. Again, taking the states traversed by the 94th meridian, the death-rates are as follows: Minnesota, 1.1; Iowa, 1.2; Missouri, 1.7; but here the rise ceases, and Arkansas falls to 1.2 while its mean annual temperature is about 20 degrees Fahr. higher than that of Minnesota. On the 100th meridian it is as follows: Dakota, .8; Nebraska, .9; and Kansas 1.1, thus showing a slight gradual increase with the rise of temperature. But the relative positions of Dakota and Nebraska in the scale, were reversed in 1870; while Arizona and New Mexico, with about the same temperature as Tennessee, have about the lowest death-rate in the United States; while Tennessee has nearly the highest. Southern California, with a mean annual temperature considerably higher than the northern portion of the state, is almost exempt from the disease, while it is very prevalent in the latter portion of the state. Oregon and Washington Territory with a temperature more than 20 degrees lower than that of Arizona, have a mortality from consumption more than three times as great.

What, then, are the inferences to be drawn from these facts, regarding the etiological relation of different mean annual temperatures to consumption as indicated by its mortality? From the Atlantic coast alone we are justified in concluding that consumption diminishes, almost *pari passu*, with a rise of temperature. This is rather the statement of a fact than an inference. But, on the other hand, that temperature alone is either unimportant or entirely masked by other conditions, is abundantly shown. The same isothermal belt, for instance, traverses Maine and Minnesota; the consumption death-rate in the latter being about one-third that of the former. That the difference is not dependent upon the general healthfulness of Minnesota is conclusively proven by the fact that its death-rate from all causes is three-fourths that of Maine. The question of temperature is almost inextricably complicated with other atmospheric conditions of scarcely less importance. But in the face of the foregoing facts, the view that low temperatures protect from phthisis, while high temperatures favor its development, is clearly untenable. The facts obtained both from the Atlantic and Pacific coasts clearly point in exactly the opposite direction; and it ought certainly to be anticipated that repeated congestions, which low temperatures so commonly produce, will aggravate the disease, and make it run a much more rapid course. Not only so, but in many instances the disease apparently has its origin in such a congestion of the bronchial mucous membrane, called a "cold." Whether a specific poison is essential or not, without the "cold" the consumption would probably not have developed.

The view that a warm climate is the one in which consumptive patients will thrive the best, and those not consumptive be least likely to become so, seems equally, if not more rational upon *a priori* grounds. It is, moreover, quite as well sustained by a study of the facts already presented. It must be confessed, however, that neither view can be established by evidence derived from this source. So conflicting is this evidence, that one feels little surprise at the therapeutical antithesis enunciated in a recent monograph, viz: that extreme heat and cold are perhaps equally efficacious in cutting short the disease.[1]

But for the consumptive patient seeking a climate where he may live the longest and live the best, it would seem wiser to go where the vessels of the skin were least liable to be constricted by external cold, with the necessary sequence of determination of blood to internal organs. One such occurrence may produce irreparable, and perhaps rapidly fatal mischief. Fortunately, the false and pernicious doctrine that consumption is incurable has been completely overthrown. The question is, therefore, not always between a rapid and a lingering death, but often between death and partial or complete recovery, which may be either temporary or permanent, the very possibility of which makes the subject of treatment so much the more grave and important.

The frequency and extent of sudden changes of temperature will be passed without discussion, because of insufficient data, and the fear of extending too far the limits of this paper.

[1] "Consumption as a Contagious Disease:" D. H. Cullimore, F. R. C. S.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

Clinical and Physiological Investigations on Paraldehyde.—Dr. Vincent Cervello gives the result of his experiments with this drug in the *Archives Italiennes de Biologie*, Tome VI, Fasc. 2, as made upon himself and his assistants. The drug was taken in the early morning, when fasting, and three to four hours after breakfast or dinner. The dose varied from 1 to 3 grammes in aqueous solution. The absorption of paraldehyde through the alimentary canal he found to be very rapid, only five minutes being necessary to produce its general effect, and in five minutes more sleep was often produced. Absorption took place with similar rapidity by the rectum, hypodermically it was delayed somewhat. The character of the sleep produced was strictly physiological, the awakening was natural—no malaise, or pain in the head, and the subjects returned readily to their ordinary occupations, except that when taken in the morning, on the evening of the same day unusual sleepiness occurred early. The sleep was profound for fifteen minutes to an hour, and then a gradual diminution until awake. When kept awake after taking a dose, the somnolent feeling remained for an hour and a half or three-quarters. The radial pulse remains normal in amplitude, diminishing about four beats per minute, except in the profound sleep, when it is reduced six to ten beats per minute. Bergesio and Mosso have studied, in the brain of an individual who, having had a portion of the temporal bone resected for the extirpation of a sarcoma, a cicatrix remained in the antero-superior portion of the left temporal fossa, by means of which Mosso's method could be used to show the effects on the cerebral pulse during sleep of paraldehyde, morphia, and alcohol. With paraldehyde, the volume of the brain diminished and the blood pressure in the organ was lowered. Respiration was not modified when awake, when asleep the number of respirations diminished one or two per minute, and became also somewhat less ample. The temperature remained at normal while awake, lowering a few tenths during sleep. Healthy persons suffer no derangement of the alimentary canal from its prolonged use, no loss of appetite. The absorption of paraldehyde is too rapid to permit of its decomposition into aldehyde in the stomach, which is the view held by Limousin. Its principal elimination is by the pulmonary surface, —the expired air having a peculiar odor; the urine also carries a similar odor.

Dr. Cervello regards this agent as useful as a hypnotic, as a sedative, and as an antagonist to strychnia poisoning, and to diseases the symptoms of which resemble the latter, and he gives cases to support his views. He advises its use especially in affections of the heart where chloral is absolutely contra-indicated, giving one case of hypertrophy with myocardial degeneration, mitral stenosis and insufficiency of the aortic semilunar valves, where great relief was given. He calls it a true heart tonic. Careful examinations of cases of albuminuria show in some no alteration, in others a diminution of the amount of albumen, as indicating in the latter an amelioration of the general condition.

The counter-indications for its use seem to be reduced to the minimum by Dr. Cervello; but ulcerations in the stomach are affected unfavorably by it, nor is it well supported in the last stages of pulmonary phthisis with ulcerations of the larynx; in the case of a child he was obliged to stop its use from the excitable cough, due perhaps to direct irritation of the ulcerated mucous membrane.

As to the dose, 3 grammes furnishes the medium amount, but there are many individuals who are susceptible to 1 gramme or even less. He does not find that patients become readily accustomed to its effects, so as to require increased doses. When given, the paraldehyde must be diluted, as it produces a burning sensation in the mouth. Guyl has given it hypodermically, and finds that it produces a brisk irritation, not lasting, nor followed by any inflammatory reaction; the hypnotic effect was moderate, even after the injection of 3 grammes. Cervello has only used it on animals in this way, and they seemed to suffer considerably. The paraldehyde of commerce is often impure by containing acetal, which renders it disagreeable and less active, and valeric aldehyde, which has a poisonous action.

The Oil of Eucalyptus in Typhoid Fever.—Dr. Leighton Kesteven has been using this drug in the Brisbane General Hospital, and speaks highly (*Practitioner*, May, 1885) of its effects. He used it as a germicide in an epidemic of typhoid fever, giving ten minims made up into an emulsion with mucilage every four hours. In about eighteen months he attended 220 cases of typhoid, with but four deaths, and of these there was in every case an unfavorable circumstance. Without being absolutely nauseous, this medicine does not agree well with all stomachs, but this difficulty can be entirely overcome by careful emulsification, and the addition of half a drachm each of aromotic spirits af ammonia, spirits of chloroform, and glycerine, the latter entirely removing the rough semi-resinous taste of the oil. The effects of this medicine are, in brief, as follows:

1. It steadily and permanently reduces the force and frequency of the pulse. In one case the pulse, from being a sledge-hammer pulse of 120, went to 90 within an hour of the first dose of the medicine, and never went above 90 again.

2. Lowering of the temperature. This occurs less rapidly, and might be entirely secondary to, and dependent on, the lowering of the pulse.

3. The beneficial effect on the tongue is very marked, almost immediately alleviating the distressing dryness so universal in typhoid, and removing the thick brown coating, leaving but proportionately little fur, and frequently clearing the tongue entirely in a very short time.

4. The skin, along with the reduction in its temperature, becomes moist and soft, in contrast with the harsh, dry, hot skin so frequent and persistent, conferring a corresponding increase of comfort to the sufferer.

TAMPONING THE NASAL FOSSÆ WITH PLUGS SOAKED IN TURPENTINE.—DR. L. BODEIR, in the *Jour. de Méd. et de Chir. Pratique* for May, 1885, praises this as a simple and efficacious process, which he has often employed to arrest nasal hæmorrhage. This method occurred to him after a case in which he had used Belloc's sound and plugged the nares so effectually that for ten days the blood, not being able to escape anteriorly or posteriorly, welled up through the lachrymal canals; two little streams of blood running down the cheeks for about eight days. The case was one affected with slight fever, but resulted in the formation of petechiæ, intestinal hæmorrhage and death. Comprehending from this that tamponing alone would not suffice, and satisfied of the insufficiency of perchloride of iron, he made a tampon of small balls of wadding attached to each other by a string like the tail of a kite (in other words, the old classic vaginal tampon), soaked the balls in turpentine, squeezed them afterwards, and filled the anterior nasal fossæ with them, without regard to the posterior fossæ, which remained open. The heat causes a part of the turpentine to vaporize, and the most inaccessible folds of the fossæ come under its irritating influence, and by this means he has treated successfully twenty or more cases under diverse circumstances.

HYGRINE OR COCAINE.—Cocaine, the wonderful drug which anæsthetizes mucous membranes, and has simplified many minor operations on the eye, is very costly. Hence we must not be surprised to hear that, in Paris at all events, the manufacturers endeavor to obtain as much of the alkaloid as possible by submitting the coca leaves to a second process of exhaustion. The result is very similar to that which follows attempts to make a second infusion out of already exhausted tea leaves. Certain substances are extracted which are not cocaine, but have nevertheless a remarkable effect on the pupil, causing it to dilate in a marked manner. These substances are derivatives of hygrine, most of which are mydriatics. Eserine is not an efficient antagonist to atropine, but it is to these derivatives of hygrine. Our readers may have observed that different observers have made different statements with regard to the action of cocaine on the pupil. Some have asserted that cocaine has a powerful mydriatic effect, which others have not noticed. This difference may be explained by the above-mentioned facts.—*Lancet*, May 16, 1885.

GLYCERINE AS A TÆNICIDE.—DR. G. A. MCCALLUM, of Dunville, Ontario, writes to the *British Medical Journal*, of June 13, that glycerine is the most efficient tænicide that he has yet seen. In some cases it may be necessary to follow the glycerine with a gentle purgative. He has found that when the head of the worm is placed in glycerine, it dies almost immediately. This fact is especially important in treating cases of tænia in children.

MEDICINE.

LEAD-POISONING IN INFANTS.—DR. J. LÖWEY reports three cases of lead-poisoning occurring in infants which deserve to be widely promulgated, especially among the laity, to avoid the causes leading to the intoxication.

1. A child of five weeks of age, nourished by a wet-nurse, was suddenly seized with violent colicky paroxysms, accompanied by a bluish color of the skin. The cause was found to be the lead-containing face-powder of the child's nurse.

2. Another infant of the same age showed similar symptoms, which were traced to the use of lotions of Goulard's extract by its nurse, which she applied to her sore breast, without cleaning the latter thoroughly before nursing her child.

3. An infant of three months of age was taken suddenly ill with distinct symptoms of lead-poisoning. An examination revealed that the nursing bottle used by the infant contained a lead-cork, and that on account of a rupture in the rubber tube passing through this metal cork the lead came in direct contact with the milk.—*Wiener Medizinische Presse*, xxiv. 49. *Therapeutic Gazette*, May, 1885.

SURGERY.

A NEW TREATMENT FOR GOITRE.—The new treatment used by DR. A. WEISS (*Berlin klin. Wochenschrift*, No. 2, 1885), is the application of heated points to the surface of the tumor. By means of a Paquelin apparatus with a pointed iron, he makes punctures about one centimetre apart, the iron being at a white heat. The burns result in little scabs of one to three millimetres, which fall off in a few days, leaving behind them cicatrices which are at first red and then white. If the iron is at a white heat there is but little pain produced, and the consecutive treatment consists simply in covering the wound with a layer of wadding. The operation is repeated every six or eight days until the disappearance of the goitre, which requires, according to circumstances, from six to twelve applications. At the same time a little iodide of potassium is given but this is not essential. This treatment is particularly beneficial in endemic parenchymatous goitre; in cystic goitre it is not so much so. Sometimes during treatment the goitre ceases to diminish; he then applies, immediately after the operation, a layer of vaseline over the burns; in this way suppuration is set up under the scabs, which hastens the cure. In explaining the curative action, Dr. Weiss considers that the heated points provoke an excitation of the terminal nerve filaments, which causes a contraction of the muscular coat of the vessels, resulting in an arrest of nutrition and atrophy of the hypertrophied glandular substance. In one case where the goitre was so covered by a network of large vessels that Prof. Lüke could not administer an injection of iodine or arsenic, Weiss observed, after four or five applications of the heated points, a diminution in the calibre of these same vessels, which became normal. In this same case he applied the heated points to a greatly dilated vein in the axilla, and the next day noted a diminution in its volume. He is inclined to use this treatment in other affections; as catarrh, affections of the pleura. In one case of laryngo-tracheal catarrh, an

absolute extinction of the voice of several days' standing was completely restored by one application of the heated points.

CONSERVATIVE SURGERY IN ARTICULAR TUBERCULOSIS.—M. OLLIER *(Revue de Chirurgie)*, terminates his remarkable work upon direct interference in articular tuberculosis with the following series of conclusions:

1. The chronic osteo-arthrites which we group to-day under the name of articular tuberculosis, present numerous clinical varieties which require different modes of treatment. Some are curable by the abrasion or destruction, locally, of the tuberculous products, without sacrifice of the surrounding healthy bone tissue: others require the ablation of the bony extremity which is the seat of the disease, that is to say, a typical resection; others again must be treated by amputation of the limb.

2. Whatever may be the views of to-day upon the infectious nature of tuberculosis, what is, or appears to be local tuberculosis in man, is noted from its resting indefinitely restricted to its original seat and with little tendency to generalise. All cases of articular caries are not tuberculous, but the greater part are closely related to that form of disease. The progress of tuberculosis is very variable, according to the subject. The question of individual constitution is a very important one, the same germ developing or aborting, according to its field for culture.

3. It is in the local tuberculosis and in all the circumscribed suppurative lesions, whatever may be their cause, that conservative operations on the limbs and economical operations on the bony tissue are particularly indicated. We are guided in our choice of operation, according to the extent and seat of the lesions, and with the purpose of removing as completely as possible a focus which might become at any time the point of departure for secondary infection by the migration of new colonies of bacteria or other infectious germs.

4. A spontaneous cure of osseous and articular tuberculosis is often observed in infancy and adolescence; it acts by elimination or transformation of the morbid products. In removing by surgical means the tubercular products, we follow the method indicated to us by nature when she cures these affections by spontaneous elimination. With the adult, the spontaneous cure of tubercular osteo-arthritis is much rarer; the coexisting visceral lesions are more frequent and the generalization more menacing.

5. It is in infancy and childhood that these various conservative operations are especially indicated; with the child typical resections are performed by preference, operations which will not interfere with the growth of bone by the cartilage of conjugation. Amputations are more frequently necessary in middle life and old age; but there is a great difference in the indications, according to the character of the articulation itself and the clinical progress of the tuberculosis.

6. The idea of removing as little as possible should always guide the surgeon; but applied to the generality of tubercular lesions this idea leads to most deplorable therapeutic errors. Among the conservative operations, arthrotomy, abrasion, gouging, and tunneling of the bone, which give such good results in children, should not be undertaken with the adult except with great reserve. When lesions that are manifestly tubercular are to be dealt with, the whole of the bony extremity must be removed to obtain a rapid and complete cure.

7. In spite of antisepsis, the economical operations on the bony tissues are graver in the large articulations than the typical resections, and they are less efficacious. Uncertain in their results, on account of the possible diffusion of the tuberculous focus, they are always open to the fear of a local relapse, they expose the cases to a generalization of the tuberculosis, not only more than amputation, but more than the typical resection, which removes the habitual seat of the tubercular foci and extends beyond their limits.

8. The rule of removing all of the tubercular products does not implicate the supporting tissues which only present the lesions of chronic inflammation. In removing the totality of the fibrous articular tissues, there results from the resection very defective orthopædic and functional changes. These tissues must be preserved and modified ulteriorly, if they become fungous. Therefore an immediate reunion of the parts after resection in tubercular osteo-arthritis, is not desirable; there must be reserved a means of modifying or destroying the fungous granulations which may re-form.

9. Amputation is undoubtedly the operation most likely to put secondary infections out of the question; but it cannot be considered as a radical operation, on account of the persistence of the deeper and inaccessible glands which are always more or less involved in the older lesions. It is particularly indicated in osteo-arthritis of the lower extremities; for it is important to sustain promptly the patient against the alterations of nutrition which result from prolonged inaction and lying in bed.

10. When an articular resection has been followed by a local cure, which is complete and permanent, and a stable cicatricial tissue has replaced the fungous tissue, the patient is no more exposed than after an amputation to the invasion of the internal organs. This permanence of the local cure, whilst the internal organs might become invaded, is the great argument in favor of resection. The patient has preserved his limb, and finds himself in as favorable a condition as after an amputation, so far as secondary infection is concerned.—*Jour. de Médecine de Paris*, May, 1885.

OBSTETRICS AND GYNÆCOLOGY.

THE INFLUENCE ON LABOR OF THE INTERVAL BETWEEN FIRST AND SECOND LABORS.—LUDWIG KLEINWAECHTER *(Zeitsch. f. Geb. u. Gynäk.*, T. XI, cap. I), gives the following:

1. Women who become pregnant for the second time, after a long interval of time (6 to 16 years), become subject to sickness, whether accidental or dependent upon pregnancy, much more readily than those who conceive more rapidly (1 to 6 years); this

is particularly the case when the interval of time is 10 years and longer.

2. Persistent vomiting manifests itself more frequently after a long interval than after a short one.

3. There is less liability to ante-partum hæmorrhage.

4. There is a relative or absolute increase in the liquor amnii.

5. The duration of labor is greater, and relates particularly to the first period, the other two being but little modified. If the interval be more than 10 years, the duration of the third period is increased, and labor appears to be as long, or even longer, than with primaparæ.

6. The duration of labor with biparæ is about 10½ hours.

7. In cases of long interval feebleness of contractraction is more marked. Lacerations of the perinæum are more frequent, as also post-partum hæmorrhages, adhesions of the placenta, diseases of the kidneys, and increase in frequency of œdema of the extremities without albuminuria.

8. Inflammations of the breast diminish with the length of interval, as well as the amount of milk.

9. Morbidity and puerperal mortality increase.

10. Puerperal mania does not seem to be increased.

11. The longer the interval, especially after 10 years, the less prospect is there for the pregnancy to reach full term. The length of the interval has no sensible influence on the frequency of normal or abnormal presentations of the fœtus. It favors the birth of girls rather than boys. The child is larger and longer. The shorter the interval the greater the disposition to prolapsed funis. Twin pregnancies increase with the interval, as also fœtal malformations.

12. The longer the interval the greater the fœtal mortality. This is applicable to still-births, to children dying immediately after delivery, and to those who die in the eight days after delivery.—*Archives de Tocologie*, May, 1885.

FACE AND BROW PRESENTATIONS.—DRS. BEUMER and PEIPER contribute to the *Archiv für Gynäkologie* (Band xxiii, Heft 1), an account of the midwifery clinic at Griefswald, under Professor Pennice, during the last 25 years. The most interesting part of the instalment given is that which relates to the cases of face and brow presentation observed. (1) *Face presentations.*—The births in this clinic in 25 years numbered 6,336, and among these occurred 54 cases of face presentations, a proportion rather above the average. The authors consider, in the light of these cases, some of the causes commonly assigned for these presentations. First, they consider Braun's theory, that they are due to reflex movements of the fœtus, producing extension of the chin, which is then grasped by the wall of the uterus, and so fixed in the pelvic inlet, a theory in accordance with which Braun asserts that face presentations cannot occur with placenta prævia, nor with a dead fœtus. These assertions are negatived in the paper before us, by the record of cases in one of which face presentation occurred with placenta prævia, and in the other with a decomposing fœtus. The authors next consider the dependence of face presentation upon pelvic contraction, a condition said by Winckel to be present in rather more than a fifth of all face presentations. Our authors, out of 54 face cases, find contracted pelvis present in only 4. They therefore agree with Hecker, in thinking pelvic contraction only an infrequent cause of this presentation. Hecker's theory, that it is often due to a dolicho-cephalic head, is the next subject for discussion. It is, as every one knows, common for children born after face presentations to have heads longer than common, but this is mainly due to compression during labor. Drs. Beumer and Peiper nevertheless think that in some cases face presentation may be due to peculiarities in the shape of the head, either greater length, or unusual width in the biparietal measurement. They refer to cases published by Fritsch in which not only was the biparietal measurement unusually large at the time of birth, but in the first few days of life still further increased, this latter fact proving that the increase was not produced by pressure during labor. Out of the 54 cases in the Griefswald clinic, in 6 the head was unusually large, and in two there was hydrocephalus. Our authors give three cases in which face presentation was primary, that is, present before the beginning of labor. In one it was present 5 days, in another 10 days, and in another 8 days, before the commencement of the pains. The infantile mortality was 6 out of 54. In 5 cases forceps were used, 7 times delivery was effected by turning, twice by perforation, and in one case the "accouchement forcé" was resorted to, with a fatal result to the mother. The special therapeutical measure which the authors favor in the most difficult cases, viz.: those with the chin posterior, is the rotation of the chin forward with the forceps. This was attempted in two of the cases, in one with success, in the other without, perforation being then necessary.

(2) *Brow presentations.*—Of these no less than 9 occurred out of the 6,336 cases. Six of the children were still-born, and three of the mothers died, another of them being left with a vesical fistula, facts which sufficiently show the difficulty of labor with the head presenting in this position. In three cases, labor was terminated by the natural efforts, in two of them the head passing through the pelvis in the brow position, in the other the prow presentation being spontaneously converted into a vertex. Three were delivered by forceps, two by turning, and one by perforation. The authors remark upon the paucity of information given in most text-books, upon these extremely difficult cases. They recommend that, if brow presentation is early recognized, turning should be performed. If not seen until too late for turning, *i. e.*, when the liquor amnii has escaped and the uterus has contracted round the child, then they think forceps should be applied, by traction with which the malposition will sometimes be corrected. Attempts at converting the brow presentation into a face or vertex, by pressure with the finger, as is advised in many books, they think almost invariably fail. If by the forceps delivery is not quickly effected, then they advise perforation without further delay.—*Medical Times*, May 16, 1885.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, JULY 4, 1885.

THE INTERNATIONAL MEDICAL CONGRESS OF 1887.

The General Committee on the Organization of the International Medical Congress of 1887, assembled in the Palmer House, in this City, on the 24th of June, 1885, in accordance with previous notice. Twenty-five of the thirty-eight new members added to the Committee by the Association in New Orleans were present, while the original Committee appointed at the meeting in Washington was represonted by Drs. J. S. Billings and I. Minis Hayes. Dr. Austin Flint not being able to attend, sent his resignation as member of the Committee, which was accepted, and Dr. J. W. S. Gouley, of New York, was elected to fill the vacancy, making the whole number of members present twenty-eight. As Dr. Flint, the former President of the Committee, had ceased to be a member, a new election of officers for the permanent organization of the Committee became necessary. A few ballotings resulted in the election of Dr. R. Beverly Cole, of San Francisco, as Chairman; Dr. J. S. Lynch, of Baltimore, as Vice Chairman; and Dr. John V. Shoemaker, of Philadelphia as Secretary. Drs. J. S. Billings and A. Y. P. Garnett, of Washington were put in nomination for the latter office, but both declined to serve. The Committee having been thus organized simply as a *Committee of Arrangements* for the coming International Congress, its officers having no reference to, or connection with any offices in the Congress itself, proceeded to the important work for which it had convened. A motion made by X. C. Scott, of Ohio, directing the Chairman of the Committee to appoint a Sub-Committee of nine members to consider and report on such revision and amendments as might be deemed necessary, of the previously adopted rules and appointments for the proposed Congress, was adopted, and the Chairman appointed the following members such Committee:

X. C. Scott, of Ohio; J. S. Billings and J. B. Hamilton, of D. C.; J. W. S. Gouley, of New York; W. A. Wathen, of Kentucky; John V. Shoemaker, of Penn.; E. F. Upham, of Vermont; J. W. McLaughlin, of Texas, and D. A. Linthicum, of Arkansas.

The General Committee adjourned until 7:30 P.M., and subsequently to 9 A.M., of the next day, for this Sub-Committee to complete a report.

On the assembling of the General Committee on the morning of the 25th, the Sub-Committee presented a report, which after free discussion and some alterations was adopted. We had hoped to receive from the Secretary an official copy in time for this week's issue of the JOURNAL; but in the absence of such copy, it is sufficient for our present purpose to state that there was no desire manifested to make any revolutionary or radical changes in the general plan of organization previously adopted. On the contrary, nearly all the general rules pertaining to the membership and the working of the Congress, both in the general sessions and in the sections, were left unchanged. Those relating to the organization of the General Committee itself were very properly so changed as to make them applicable to a Committee of Arrangements only, and not to a committe whose officers were to be nominated for election to the chief offices of the Congress. The nineteen sections previously provided for were reduced to sixteen by adding obstetrics to the section of gynæcology, nervous and mental diseases to the section of medicine, and oral and dental surgery to the section of surgery. The chairmen of only four of the sections were changed, namely: Section 1.—Medical Education, Legislation and Registration, at the head of which was placed Dr. Stanford E. Chaillé, of New Orleans, instead of Dr. Henry P. Bowditch, of Boston. Section 9.—Opthalmology, to which was assigned Dr. E. Williams, of Cincinnati, in the place of Dr. Henry D. Noyes, of New York. Section 13.—Laryngology, of which Dr. J. W. Mackenzie, of Baltimore was made Chairman in place of Dr. George M. Lefferts, of New York; and Section 18.—Diseases of Children, of which Dr. J. Lewis Smith, of New York, was made Chairman instead of Dr. A. Jacobi of the same city. The chairmen of the remaining twelve sections were left unchanged, viz.: for Anatomy, Dr. Joseph Leidy, of Philadelphia; Physiology, Dr. John C. Dalton, of New York; Pathology, Dr. Francis Delafield, of New York; Medicine, Dr. J. M. Da Costa,

of Philadelphia; Surgery, Dr. D. W. Yandell, of Louisville; Obstetrics and Gynæcology, Dr. Robt. Battey, of Rome, Ga.; Otology, Dr. Clarence J. Blake, of Boston; Dermatology and Syphilis, Dr. Wm. A. Hardaway, of St. Louis; Public and International Hygiene, Dr. H. A. Johnson, of Chicago; Collective Investigation, Nomenclature and Vital Statistics, Dr. N. S. Davis, of Chicago; Military and Naval Surgery and Medicine, Dr. D. L. Huntington, of U. S. Army; Practical and Experimental Therapeutics, Dr. H. C. Wood, of Philadelphia.

By the foregoing changes, it will appear that instead of five Chairmen of Sections being centered in New York and four in Philadelphia, making within a fraction of one-half of the whole number in those two cities, the number in each of these cities is reduced to three, while the remaining ten are distributed as follows: Two in Chicago, Ill.; one in Cincinnati, Ohio; one in St. Louis, Mo.; one in Louisville, Kentucky; one in New Orleans, La; one in Rome, Ga.; one in Baltimore, Md.; one in Boston, Mass.; and one in the Medical Corps of the U. S. Army. When the complete record of the doings of the Committee is obtained showing the names of the Secretaries and members of the Councils of Sections, it will be found that a still more general selection has been made from all parts of the country, and yet without any lowering in the standard of the qualifications of those selected. If we are correctly informed, Dr. Austin Flint, Sr., was again selected for nomination as President in the Preliminary Organization of the Congress, and with the exception of one or two, the same list of Vice-Presidents as previously selected and published. It will thus appear that the work of the Committee during its recent meeting, has been, as we predicted, highly conservative and for the most part judicious.

So far from acting the part of "soreheads" and "outs" anxious to get themselves into official positions, as represented by certain Medical Journals, they have preserved a very large part of the work previously done, and left but one of their own number occupying any prominent official position in connection with the Congress, namely, Dr. Robert Battey, of Georgia, who remains Chairman of the Section of Gynæcology, to which he had been appointed before the reconstruction of the Committee at New Orleans. The Original Committee appointed at the meeting of the American Medical Association in Washington, having become satisfied that the Association at its more recent meeting in New Orleans, had a perfect right to reconstruct the Committee and order a revision of the work done, have re-called their notice for a meeting of the Old Committee at Washington in September next, and formally accepted the New Committee Organization. For the benefit of the editors of several of the medical journals in this country, who have captiously denounced the National Association for doing what they claimed it had no right to do, we append the following letters from the Hon. Samuel J. Randall, late speaker of the House of Representatives in Washington, which were presented by Dr Garnett in the recent meeting of the Committee in this City, and by vote of the Committee placed in our hands for publication. It will be seen that Mr. Randall fully sustains the views we gave in this Journal for May 30th and June 6th, on the same subject.

MAY, 28TH, 1885.

DR. S. W. GROSS, Philadelphia.

Dear Sir:—Yours of the 22d inst. was duly received. The questions presented are somewhat novel, and are without Congressional precedent. It is therefore necessary to consider them in accordance with the general principles of parliamentary law, and so far as possible, in accordance with analogous cases.

The annual meeting of the American Medical Association may be said to correspond substantially with an entire Congress, or a session thereof. Under the rules of the House a motion to reconsider can only be made on the "same or succeeding day," and consequently would not be in order at a subsequent session. You do not state the rule of the Association on this point, but I assume there is no rule authorizing a motion to reconsider to be made at a subsequent session of the Association of a vote of the preceding session.

The report of the committee under the resolutions of 1884 (though not required to submit a report), presented the entire question to the Association at its meeting in 1885, having substantially all the effect of a reconsideration of the resolutions of 1884, or in other words, as stated by Mr. Cushing, "it again brings forward that question, to be discussed and decided in the same manner it was originally, for the consideration and determination of the assembly." This statement of Mr. Cushing is based on decisions of Speakers Winthrop and Boyd, and is in full accordance with the established practice of the House in that respect. The resolutions adopted on the 30th of April, 1885, marked "B," taken as a whole are somewhat contradictory and inconsistent. The first resolution "enlarged" the original committee of seven by the addition of 38 members, and authorized the committee thus "enlarged" to review, alter and amend the action of the *present* committee as it may deem best.

As the resolutions of 1884 fully authorized the original committee of seven to add to its membership and perfect its organization, it can not be claimed that in that respect it "had exceeded its powers." If the first resolution of April 30th, 1885, stood alone it is clear that the committee would consist of the original committee of seven as "enlarged under authority of the resolutions of 1884, and as further enlarged by the resolutions of 1885. But the second resolution of April 30th, 1885, expressly and in specific terms recognizes the committee as consisting of the original committee of seven, enlarged by the addition of 38 members under the resolutions of April 30, 1885, and the authority granted to select its officers and to "appoint the officers of the Congress" plainly shows that the resolutions of 1885 were intended as a complete substitute for those of 1884.

It is well settled—indeed a fundamental principle of parliamentary law—that every legislative or other body has the right to control its business by way of "instructions to committees."

It may instruct a committee to do a particular thing on Monday, amend such instructions on Tuesday, repeal them all on Wednesday, and if it pleases, abolish the committee on Thursday.

In treating this subject Mr. Cushing, after stating generally the powers with which a select committee is clothed for the performance of its duties, says: "It is also competent for the house, *afterwards*, to enlarge the authority of the committee,

either as to subject-matter or its incidental power, by means of what are called instructions."

The resolutions of April 3, 1885, are therefore, in a parliamentary sense, "instructions" to the committee of seven appointed under the resolutions of 1884. In my opinion, following the rules of construction as laid down by the writers on the construction of statutory and constitutional law, which is to give effect to what was manifestly the intention of the body, and giving such construction, if possible, as will avoid contradiction and inconsistency, the resolutions of April 30, 1885, abrogated the resolutions of 1884, so far as related to the powers and duties of the Committee of Seven; and the members of the General Committee, added to the original committee, under the resolutions of 1884, were "legislated out of existence" by the resolutions of 1885. I am, yours respectfully,

S. J. RANDALL.

WASHINGTON, D. C.

DR. A. Y. P. GARNETT, Washington, D. C.

Dear Sir:—Yours of the 5th inst. is received. In reply I have to say that the questions submitted by you are substantially those presented in a letter from Dr. S. W. Gross, of Philadelphia, of the 25th ult., and I enclose herewith a copy of my reply thereto as covering the entire ground of controversy.

I might add, in addition, that the theory that a select committee created by a body with certain defined powers and duties gives any *vested rights*—so to speak—which places it above or beyond the power of the creating body to review or regulate, is one not only without precedent in parliamentary law, practice, or history, but is untenable on any ground of parliamentary principle. A legislative or other body may, if it sees proper, temporarily delegate as a matter of convenience, certain of its powers and functions to a select or standing committee, but it does not thereby part with its inherent right to resume that power whenever it chooses, and that right is one which the committee can not question. I am, very respectfully,

June 9, 1885. SAM. J. RANDALL.

THE CONDITIONS OF CURABILITY OF PHTHISIS.

Those who have read Professor Jaccoud's work on the "Curability and Treatment of Pulmonary Phthisis," are aware that he asserts that the disease is curable in all its stages, and that the dictum of incurability is but a historical souvenir. It is not asserted that all cases of phthisis can be cured, however; there are certain conditions obtaining in every case, which must to greater or less extent, determine the prognosis and curability. And, according to Jaccoud, the first condition of success, is the conviction on the part of the physician that the disease is curable; for it is this conviction that leads to the adoption of every possible therapeutic measure in a given case.

What then as regards the patient, are the conditions of curability? It goes without saying that "in the first place, whatever form of the complaint, whichever patient be considered, the chance of recovery is inversely as the duration and extent of the lesions;" a proposition so self-evident, that it need not be discussed. Beyond this, there are certain indications furnished by the etiology of the disease. Jaccoud has distinguished phthisis, as regards its origin, as the hereditary, the innate, and the acquired forms; the innate being that form seen in the "descendants of those who, though, not tubercular, are weakened by scrofula, cachectic diabetes, alcoholism, or simply by bad hygienic conditions;" or it may be due to consanguineous marriages. From the standpoint of curability, this form is more favorable than the hereditary form, which, from the fact that it is hereditary, offers the least prospect of cure for two reasons: "In the first place the diathesis, that is to say, the unfortunate disposition of the organism to form tubercle, has in these cases its greatest powers," and the second place, "chronic phthisis, when hereditary, almost invariably takes the ordinary anatomical, that is the miliary form of the disease." Jaccoud distinguishes two groups of acquired phthisis: First, "those cases in which the pulmonary tuberculosis, being spontaneous and independent of other diseases, could only be due to general debility, to that insufficient or improper nutrition which is the basis of all forms of phthisis; such is 'the primary form of acquired' phthisis. Secondly, those cases in which the pulmonary disease is connected with a constitutional affection either past or present, and to the existence of which it may be rationally imputed; this is 'the secondary form of acquired phthisis."

As the primarily acquired or idiopathic phthisis is only produced by constitutional malnutrition, it is, as regards curability, the most favorable of all varieties of phthisis, it being supposed that the same extent of lung is involved; and it is much more amenable to treatment when it is acquired after the age of thirty-five. The secondary form of acquired phthisis, while much less formidable than the hereditary or innate forms, is less favorable for treatment than the primary form of the disease, phthisis, being the result, as already said, of present or past constitutional disease; and all the forms of the secondary variety, that, which is known to the authors as scrofulous phthisis is most frequent and most resistant to treatment. Furthermore, it is most amenable to treatment when the lesions are confined to the lungs. Of diabetic phthisis, it need only be said that it occurs late in the course of diabetes mellitus, thus adding a most serious complication to an apparently incurable disease. The arthritic and herpetic forms of phthisis, not being generally recognized as true forms of phthisis, need not be discussed; and acute miliary tuberculosis, which does not produce the clinical symptoms of phthisis, may be for the present disregarded.

There remain, therefore, two varieties, the so-called pneumonic form, and chronic miliary tuberculosis or the ordinary form of consumption. The pneumonic form of phthisis may be said to be especially curable; "it is most often an acquired or primary disease, or perhaps is connected with scrofula, receiving then the virtual advantage specially conferred by this etiolog-

ical cause; the lesions are either confined to the lungs," or affect other organs at a late period of the disease. Of this form of the disease, the primary period may be said to be attended by the most constant danger, as the first outbreak may prove very speedily fatal, constituting the so-called galloping consumption, which is not less serious than the acute form of miliary tuberculosis. The prognosis of pneumonic phthisis, therefore, depends very much upon the stage of the disease, being very serious at first, but in the period following the acute outbreak the least serious of all varieties. Chronic miliary tuberculosis may be said to be the expression of a very high form of the phthisical diathesis; "the hereditary and innate diseases are usually expressed in it, and this would be the cause of its greater resistance to the healing process. . . . the lesions are almost invariably bilateral, either from the first, or before the disease has been long in existence. . . . the lesions are more disposed to increase by successive miliary as usually occurs in the disease. . . . the lesions are but rarely confined the lungs; sooner or later similar changes occur in the larynx, the intestine, and at times also in the brain;" which will readily explain the unfavorable prognosis of this form. But should, as may be the case, such unfavorable circumstances not exist; should this form be connected with the acquired form of the disease, and the lesions of this form be confined to to the lungs, and of small size, the prognosis may be regarded as somewhat better than that of the pneumonic form, since the primary lesions will develop more gradually. "The chance of recovery, in fact, is then entirely dependent upon the constitution of the patient, which overrules at all times the question of prognosis."

The conditions of curability as regards the symptomatic phenomena remain to be considered. Of these it must be said, that severe forms of laryngitis and gastro-intestinal disturbances affect the prognosis to an extremely serious extent; diarrhœa due to intestinal ulceration, and ulcerative laryngitis almost necessarily indicate a prognosis of absolute incurability, as they are not only serious in themselves, but prevent the employment of most useful therapeutic agents. Hæmoptysis, unless very profuse or attended by persistent pyrexia, has not the grave signification usually attached to it. In some cases, indeed, it is to be regarded as a healthful process; as, for example, when in the initial period there is danger of congestion, causing an increase in the size of the lesions, "the hæmoptysis may be, as it were, critical in character, and dissipate, for a time at least, threatening inflammation." Under other circumstances, much will depend upon its frequency and effects on pre-existing lesions, and "the relation which the number and abundance of the hæmorrhages bear to the condition of the organism in which they occur,"—individual peculiarities being factors of great moment.

When the hæmoptysis is attended by pyrexia which persists when the former has ceased, the chances of ultimate recovery are seriously compromised. Fever, of whatever type, must always be regarded as a serious matter in a phthisical case, since no improvement can take place while it lasts; and when it is complicated by hæmoptysis the condition must be regarded as unfavorable. Another very important question as regards recovery is the degree and persistence of emaciation, especially when it occurs early in the disease; when it does occur early, persists, and possibly increases, while the disease, as shown by the local lesions, remains stationary, the possibility of cure must be excluded. There is still another symptom, depending upon the character of the individual, "which should be taken into serious consideration . . . namely: the nervo-vascular excitability, to which the name erethism has been applied. This condition may produce mere cardiac excitability and frequent attacks of palpitation . . . in other cases there is general nervous excitability without any pronounced visceral disturbance . . . the prospect of recovery is diminished by its presence. Symptoms such as pyrexia and hæmoptysis may be produced or continued by its existence; . . . by producing waste it adds to the constitutional loss which characterizes the disease; and it may prevent the adoption of certain therapeutic means . . . as residence at a high altitude, or the use of hydrocarbons as internal remedies." Besides being a serious complication, it is extremely difficult to remove, and when it is present, attempts at its removal or modification should be the first care of the physician.

Such, then, are the causes, lesions and symptoms which favorably or unfavorably affect the question of curability. There are, however, three other vital principles to be considered in every case: the general condition of the patient, embracing the degree of malnutrition, the possibility of nutrition and what is generally known as the *constitution;* secondly, the existence of or freedom from intercurrent attacks of congestion or inflammation; and thirdly, the possibility of proper treatment, which involves the consideration of the means for treatment at the patient's disposal. "Nothing is so complex, so difficult to conciliate with the ordinary habits of life, so costly in expense, as the treatment of pulmonary phthisis. The disease may remain incurable, not on account of its own serious nature, but because it cannot be completely or constantly resisted . . . and the disease is therefore quite different as it affects the rich or poor, so far as the result of treatment is concerned."

SOCIETY PROCEEDINGS.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

Stated Meeting March 11, 1885.

THE PRESIDENT, DR. R. T. EDES, IN THE CHAIR.

DR. V. Y. BOWDITCH reported a case of

TRAUMATIC LINEAR ATROPHY.

During the past year my attention was called to an affection of the skin, the symptoms of which were so marked and peculiar, that I have thought it worth while to present the case to you this evening.

Mrs. A., a widow, aged sixty, with children, a person of decidedly sensitive and nervous temperament, has had for many years slight aortic disease, which in the last two years has shown somewhat more marked symptoms, together with a decided increase in bodily weight. Early in the past year, she began to have an annoying paroxysmal cough, which, after repeated examinations of throat and lungs, with negative results, I came to the conclusion, was of nervous origin, and, owing to her generally debilitated condition, I prescribed change of scene and air, and sent her to a relative's house in the country. On the twenty-sixth of February, a year ago, I was called to see her, and found the cough was still quite severe, at times causing vomiting and much dyspnœa. The patient complained also, of an extreme sensitiveness confined to the lower abdomen. Upon examination, nothing abnormal was to be seen, but upon palpation, the walls of the abdomen, which was large and pendulous, were very sensitive, which symptom I regarded as rather hysterical than otherwise. I prescribed, however, a liniment containing aconite root and chloroform, with soap and opium, and did not see her until the following week, when she sent me word that several small puffy excrescences had appeared upon the abdomen, accompanied by a feeling of great heat and distension. Upon examination, the lower quarter of the abdomen down to the pubes and Poupart's ligament was very hyperæmic, and, ramifying in every direction upward, were curious, whitish, œdematous-looking elevations from one-eighth to one-fourth of an inch in width, most marked near the pubes and median line, and gradually disappearing toward the line where the hyperæmia ceased; the whole having in arrangement the appearance of the branches of a tree, and giving to the finger, the sensation of very soft, crumpled rice-paper. I ordered the liniment to be discontinued, and a lotion containing the acetate of lead was substituted The following week, the hyperæmia increased, and the elevations had increased in size, in some places having coalesced so much as to make lumps as large as half of a pullet's egg. There was no marked tenderness, but a feeling of heat and puckering all the time, with a sense of distention of the parts, which caused much discomfort to the patient when sitting upright in a chair. The general symptoms were not materially changed.

Not being satisfied with the course of the trouble I called in consultation Dr. J. C. White, who considered it a very marked and rare case of either linear atrophy or keloid, and recommended leaving off all applications and using an abdominal supporter to relieve the tension of the skin. Owing to delay in obtaining the supporter it could not be applied until some two weeks later, and as the hyperæmia and the elevations seemed to be slowly disappearing, I decided not to use the supporter, and see if the abdomen would not regain its natural appearance without aid of any sort. Two weeks later, the hyperæmia and swelling had entirely disappeared, leaving only numerous cicatrices similar to those noticed on the thighs and abdomen of a woman who has born children, or whose abdomen is large and pendulous.

In the *Journal of Cutaneous Medicine* (vol. i. p. 140) Sir Erasmus Wilson speaks of "Striæ et Maculæ Atrophicæ Cutis, or false cicatrices of the skin." By these names he designates the whitish, slightly curved, puckered streaks so well known to us as seen on the abdominal walls and thighs of women who have born children. He considers that these marks are due to rupture of the corium, with loss of the subcutaneous fat, of the papillary layer of the derma, of its vessels and nerves, leaving a smooth and unmoulded epidermis. From this loss of substance arises the name of striæ atrophicæ, or linear atrophy. He mentions, also, the existence of similar false cicatrices in the skin which have arisen under different conditions from those of pregnancy, and divides them, according to the nature of their origin, into three classes of linear atrophy, namely: (1) neurotic, (2) traumatic, and (3) idiopathic.

Under the first head come the lines sometimes noticed over the course of cutaneous nerves which have been paralyzed. For instance, in cases of paralysis of the supra-orbital, the course of the nerve can be traced by the whitish line which marks the position of the nerve, and which, some time later, loses its sensibility and becomes atrophied, resembling the scar of a sword-cut, the line in this case being more firm and condensed than in the other forms.

Under the second head, namely, the traumatic form, Wilson considers all those cases which arise from overdistension of the skin from causes acting from within, and mentions the conditions of pregnancy, of dropsy, and obesity. He likens this condition to that of a rubber bag which is overdistended with gas; it first yields, and then gives way at the weaker places. He concludes: "In the corium, this violence is accompanied with hyperæmia and followed by exhausted nutritive power and atrophy."

The third, or idiopathic, form he considers appears without apparent cause, although the nutrition of the skin is evidently affected by an unhealthy general condition. Unlike the traumatic form, moreover, it appears in parts of the body not subjected to distention of any sort.

This case I class under the second head, namely, linear atrophy of traumatic origin. We have the history of long-continued paroxysmal cough, causing frequent and violent distention of the abdominal walls, which, owing to the debilitated condition of

the patient, yield in the manner mentioned above, and after two or three weeks of acute hyperæmia and swelling, a gradual diminution of the symptoms occurs, until no vestige of the trouble is left except the small cicatrices of the ruptured corium.

In this case the symptoms were all unusually well marked, and to one whose attention had never been called before to the affection the appearance was decidedly puzzling, not to say alarming.

Diagnosis.—The only other disease with which linear atrophy could be confounded is the so-called "keloid," and several authorities speak of the marked similarity between the two affections, and the frequent difficulty of distinguishing one from the other. Cases of the latter are divided by most authors into two classes, namely, the true and the false keloid, according to the idiopathic or traumatic origin of the affection.

True keloid is the name applied to an affection characterized by a collection of small red tubercles, usually found upon the sternum, sides of the body and back, which increase in size slowly until they coalesce, forming oval or cylindrical-shaped tumors, dry and puckered in appearance, with spur-like processes, somewhat tender upon pressure, and firmly rooted in the skin. This process of growth may go on for months or years with more or less discomfort to the patient from a sense of burning or itching, and the affection rarely disappears, although exceptional cases are reported in which entire disappearance of the tumors was noticed. False keloid is a term used to designate the exaggerated cicatricial tissue noticed in places where a wound has previously existed, and differs from the true form in that it is usually smaller, longer, bifurcating, and follows the course of the original lesion. The difficulty oftentimes of drawing the line between true and false keloid is spoken by Kaposi in his article on "Keloid," Lehrbuch der Kinderkrankheiten, vol. ii.

The course of the disease, its sudden appearance and comparatively rapid disappearance, the absence of tenderness in the tumors themselves, are facts which enable us to decide against the presence of keloid in the present case. The slight elevations noticed, resembled the tumors of that disease, but their rapid shrinking, leaving nothing but the ordinary atrophic lines, is another proof of the non-existence of keloid.

Treatment is of little avail in these cases, and the disease will, as a general rule, run its course uninfluenced by medication. Attention to the general health and an attempt to remove the exciting causes are chiefly indicated, as in this case, for instance, where an attempt was made to relieve pressure on walls of the abdomen by means of a supporter, medicines to relieve the paroxysmal cough were given. Sedative applications are of little or no use in checking the course of the affection.

In conclusion, the question might naturally arise—Could the affection described have arisen from the application of the liniment containing aconite-root and chloroform, with soap and opium? Such a supposition can hardly be sustained: *first*, from the fact that no case has ever been recorded of similar trouble arising from the use of this very common remedy; *second*, because attention had been called to the extreme sensitiveness of the lower part of the abdomen before any external applications were made; and *third*, because similar affections, in which the general symptoms were like those mentioned in this case, have been recorded by various authorities.

DR. WHITE, in discussing the paper, stated that the process is not a true atrophy, but an over-stretching of the skin by which its elastic fibres lose their contractility, and the bundles of fibrous tissue forming the skeleton of the corium and normally interwoven in the form of a network, are pulled out straight and left in a permanently parallel direction. The papillæ and the glandular structures are pulled farther apart, and the former flattened down. The stretching of the corium might result in real fracture of its tissues. The process is at times accompanied by hyperæmia, so that the streaks looked redder than the surrounding skin seen through the stretched and thinned epidermal layers. The cause is always a distension of the integument by some power acting beneath it, as pregnancy, a rapid accumulation of subcutaneaus fat, ascites, and the like, and occurs principally over the abdomen, breasts, and thighs. It affects men as well as women, and may possibly be caused by rapid increase in size in young people. The present case presented some very uncommon features. The hyperæmia and tenderness or the parts were as pronouncod as in an active dermatitis. The elevation and firmness of the radiating ridges resembled keloid or hypertrophied scar formation, and must have been due to the presence of the products of inflammatory infiltration. The exciting cause was apparently the rapid accumulation of subcutaneous fat and the rending action of the spasmodic cough.

DR. EDES asked the distinction between the scars of linear atrophy and those of pregnancy, and how the distinction can be recognized.

DR. WHITE stated that at times hyperæmia may accompany œdema.

DR. H. I. BOWDITCH asked if the liniment applied could have caused or increased the hyperæmia?; to which the reader replied that in his opinion this could have had nothing to do with it.

DR. LYMAN observed that we see similar cicatrices on the thighs of virgins and others who have never borne children.

DR. WHITE admitted that this may occur, but it is generally in persons who have a large amount of fat, and results from simple distension. It is at times seen in the breasts of fleshy women. It is not a true atrophy, but results from a mechanical pulling out of the tissues from simple distension.

DR. F. C. SHATTUCK read a paper on

A CASE OF MULTIPLE SARCOMA OF THE SKIN.—TREATMENT BY SUBCUTANEOUS INJECTION OF FOWLER'S SOLUTION, WITH RECOVERY.

July 26, 1883, K. B., 31 years old, was admitted into the Massachusetts General Hospital. Her health had usually been good, and she had worked at dressmaking up to the time of admission. Seven months

before that date she began to suffer from pain along the lower jaw, and soon after noticed swelling behind the angles of that bone. About two months later, nodules appeared in the skin over her right shoulder, then on her right arm, next on the left, next on the abdominal wall. She thinks that the appearance of the nodules was preceded by local tenderness and followed by discoloration. About three weeks ago she noticed that her face was fuller than normal, and she began to suffer from pain in the cardiac region. She was somewhat short of breath on exertion, and reported that she had lost decidedly in strength, though not in flesh. The bodily functions were in fairly good order. Pulse 120, regular, rather weak.

On examination, it was noted that the patient was pale, with some œdema of the eyelids and face, preponderating on the right side. Scattered throughout the skin of the upper extremities and the body as far as the umbilicus were hundreds of nodules, mostly about the size of a pea. Over the inner aspect of the arms the nodules were discrete, not raised above the surface, slightly tender on pressure; the skin could be wrinkled over them, and was not discolored. On the other hand, over the shoulders, outer aspects of the arms, breasts, upper abdomen, and back—though in the latter situation to a less degree—the nodules were so thickly sown as to form large masses or plates, very hard and but very slightly tender; the skin covering these could not be pinched up or wrinkled, and was markedly erythematous, with slight scaly desquamation of the epidermis. In the legs a very few nodules could be felt, and there was no erythema. The glands at the angle of the jaw were enlarged, but those of the axilla and groin were apparently normal. Thorough examination failed to reveal any material modification of the great viscera. I made the diagnosis of multiple sarcoma of the skin, and soon after Drs. White, Wigglesworth, and Tilden were kind enough to accede to my request to see the patient, concurring in the diagnosis.

General tonic treatment was prescribed at first, but Köbner's brilliant success in a similar case with the subcutaneous use of Fowler's solution induced me to adopt his plan toward the end of August. An injection of four minims, diluted with an equal quantity of water, was given once daily, deep in the thigh. September 15 Dr. Tarbell resumed charge of the wards, and soon after increased the injection to six minims. The general health of the patient improved, a few fresh nodules appeared, but the old ones disappeared in much larger numbers, and November 3 she was discharged from the hospital, in order that she might work a portion of her time. She came daily to the hospital, however, for her injection, until she was furnished with a syringe and taught its use, and treatment was persisted in steadily till the middle of March, when I opened an abscess in the thigh, the only one which formed during the whole time. A few nodules still remained, but the masses which filled the skin over the breasts, abdomen, and outer side of the upper arm had entirely disappeared, and during the past year she has been under observation from time to time without any treatment whatever, and has worked steadily at her trade. I have seen her within a few days, and she remains perfectly well to all appearance.

Early in 1884, I showed her at a meeting of the Medical Improvement Society, but have purposely allowed a year to elapse before reporting the case, in order that there might be no doubt as to the result.

Cases of multiple sarcoma of the skin are rare, and the authorities on diseases of the skin have little to say on the subject. All agree that the prognosis is absolutely unfavorable, and the course generally a rapid one. Köbner's is the only case recorded up to date, so far as I am aware, in which recovery took place. I now regret that one of the tumors was not excised and examined microscopically, as was done by Köbner. The patient was extremely averse to the operation, and preferred to wait, promising that she would make no objection if she got worse. To this delay I consented, having very little faith that treatment would prove of any avail. Still, even without the evidence without the evidence of the microscope, I think there can be no doubt as to the diagnosis. The experts were unanimous, and I had previously seen two other cases very similar, except that they ended fatally. Was the cure really attributable to arsenic? If so, would the drug have acted as well administered in the usual way by the stomach? These are questions which can only be answered by extended experience. It is interesting to state that ten days after the arsenic was stopped the urine was examined for its presence by Professor Wood, with a negative result.

Dr. White stated that two years had passed since the last report on Professor Koebner's case, and, so far as he knew, the patient remained well. He saw no reason why the internal administration of arsenic should not work as effectually as the subcutaneous injection. He had at present a similar case of multiple sarcoma under treatment by Fowler's solution given by the mouth, but it was too early as yet to report results. Some forms of sarcomatous growths in the cutaneous tissues showed a marked tendency to spontaneous involution, that is, if we regard the so-called mycosis fungoides, or granuloma fungoides, or lymphadenoma, etc., as it is variously titled, of this nature. In this affection, of which he had had recently two examples under observation, tumors the size of a hen's egg or larger will rapidly disappear, notwithstanding its malignant character. The pathology of this form of disease was not yet fully established, and, although several excellent microscopists had determined the presence of a sarcomatous structure in it, clinically it was distinct from the form presented in Dr. Shattuck's case. Pigmented sarcoma did not appear to undergo involution with or without treatment. In reply to Dr. Blodgett's comments he stated that he saw no reason why a sarcoma should not confine itself to the cutaneous tissues in some cases, just as carcinoma may be restricted for an indefinite number of years to the same structures without manifesting a tendency to invasion of other parts of the system or to general malignancy.

Dr. Tilden showed the photographs of a case interesting in connection with Dr. Shattuck's paper. The case had been under Dr. Tilden's observation,

having been sent to him by Dr. Vincent Bowditch and had been referred to by Dr. White as a variety of cutaneous sarcoma. The disease was more common than that which Dr. Shattuck had reported, there being recorded in medical literature from thirty-five to forty cases. In the majority of cases it occurred in the male sex, and most commonly in advanced middle life from forty to sixty years. The malady had no connection with syphilis, and most of its victims had always been in good health. It began with fugitive, erythematous, and inflammatory lesions of the skin, attended with great itching and desquamation. After this condition of the skin had lasted some time, a year or more, there appeared the lesions which were characteristic of the disease, namely, cutaneous tumors appearing either on normal skin or in regions which were already affected by the inflammatory lesions already mentioned. These tumors increased in size until often the epidermis covering them was cast off, exposing to view the pathological tissue of which they were composed, from which exuded a thin fluid which dried and formed crusts. The most remarkable feature of these tumors, and one which had been mentioned by Dr. White, was that they often spontaneously and completely disappeared, apparently by reabsorption, at the same time that other lesions of a like nature were showing themselves in other parts of the body. The disease is of chronic course and fatal termination, and its clinical features are well understood, Bazin's excellent description leaving nothing to be desired in this connection. Its pathogenesis, however, has yet to be determined. It is regarded by Kaposi and also in this country as multiple sarcoma of the skin, while several German authorities look upon it as a granulative tumor of the skin, giving to the disease the name of granuloma fungoides. The French dermatologists regard the affection as belonging to the same category as Hodgkin's disease, or pseudo-leukæmia, where, without marked or permanent increase in number of the white corpuscles of the blood, there occurs general hyperplastic enlargement of the lymphatic glands and spleen, together with the formation of so-called cytogenic or lymphatic tissues in various parts of the body. Microscopic examination showed the tumors to be made up of a dense infiltration of the corium with round cells resembling lymph cells which, according to Ranvier, were contained in a fine, fibrillary network, presenting stellate connective tissue cells at the points of intersection of the fibrillæ, the presence of this network showing the new formation to be one of cytogenic tissue, and not sarcomatous in nature. Dr. Tilden had excised two of the tumors from the question, but had not yet had time to give them a thorough examination, and was of the opinion that if the presence of this lymphatic reticulum could be satisfactorily made out, that it would go far toward showing the cytogenic nature of these tumors. In determining the pathogenesis of any malady also, its clinical course should be taken into consideration as well as the minute anatomy of its pathological products, and the malady in question had many of the clinical features of pseudo-leukæmia. In none of these cases had there been observed sufficient increase in number of the white corpuscles of the blood to constitute typical leucocythemia, and at the autopsies, as a rule, there had been found enlargement of the lymphatic glands, and often also of the spleen. The last case which had been reported was by Auspitz, in Vienna, last December, and in this case the tumors, upon investigation, have been found to contain large quantities of micrococci. Considering, however, the extremely favorable conditions in the shape of warmth and moisture furnished by these fungous excrescences deprived of epidermis, any microorganism found in them can hardly be regarded as anything but an accidental phenomena.

DR. LYMAN stated that he had a case under observation in which the features were similar to those described by Dr. Shattuck. The patient was seen some twelve or thirteen years ago. The skin was covered with small tumors. The patient died, and on autopsy similar growths were found in all the internal organs. Dr. Lyman asked if arsenic is usually given in doses so small as those reported.

DR. WHITE replied that the amount given is never more than three minims at each injection.

DR. SHATTUCK stated that the amount of the injection in the present case was increased to nine minims. There is an objection to large or bulky injections in that they sometimes produce severe pain at the seat of the injection.

DR. BLODGETT considered it a matter of regret that a portion of one of the suspected growths was not removed and subjected to microscopical examination. The clinical history of the sarcomata is generally that of a most malignant form of disease, which tends to advance locally, and is often followed by degenerative changes in the growth, by which loss of substance and an ulcerating substance is produced. One of the most uncontrollable and persistent features of sarcomatous disease is also found in the tendency which these growths possess of forming metastatic deposits in remote portions of the body, and especially in the structure of the visceral organs. Each local deposit forming a new and independent local development of the original disease.

The specific treatment of sarcoma would seem to offer, *a priori*, less promise of success than would that of sarcinoma, as the latter is confined originally to epithelial structures and is essentially an affection of an external surface of the body, while sarcoma is developed in the connective tissue, the *universal* tissue of the interior of the animal body.

DR. BLODGETT suggested the possibility of the existence of a disease in the connective tissue which might resemble sarcoma in appearance, as the innocent verruca or common wart resembles a form of malignant carcinoma called papilloma, so closely that by the microscopical examination alone one might not be able to say which was malignant.

For this additional reason it would be of great advantage to secure a careful microscopical examination of the tissues in cases of this kind.

DR. WHITE added that there is at present no known method of treatment which offers any promise of relief or cure in sarcoma. In ordinary cases the disease progresses in a way which shows the power-

lessness of all medicinal measures for its restraint or cure. He suggested that in the absence of microscopical examination of the tissues it is possible that some other condition than sarcoma may exist.

The Secretary called the attention of the Society to a card which had been sent him, announcing the presence in the city of a so-called "hermaphrodite," and stated that in company with three prominent members of the profession from Park Square he had visited the individual for the purpose of offering at the meeting of the Section a favorable opportunity for introduction to the profession as the most useful method of attracting the notice of persons interested in such a malformation.

The efforts of the Committee were not crowned with success owing to the high pecuniary consideration which was demanded before even an ocular view of the deformed region could be obtained.

The contradictory statements made by the individual led the Committee to doubt the existence of hermaphroditism, and they consider it probably an abnormal or unfinished condition of male development.

Dr. James J. Putnam described briefly a case of typical hemianæsthesia, involving all the special senses, which had developed in a strong, healthy man. as the result of a concussion two years before.

Conclusive evidence against malingering was furnished by the fact that the lines bounding the anæsthetic region of the skin and the diminished field of vision were preserved throughout a protracted examination. No outward sign of disease existed, and the medico-legal value of the symptoms described was obviously great.

Dr. Edes remarked that he had a male patient at the hospital last year who, after a fall with loss of consciousness and tempory hemiplegia, had hemianæsthesia of the most distinct character.

The field of vision was very much diminished on the affected side, and also the color fields, almost as exactly as if the man had studied and remembered Charcol's description of similar cases. Smell, taste, and hearing were diminished on the same side.

INFANTILE DIABETES.

Dr. White stated that he had recently seen a female child, aged two years and three months, the inner surface of whose vulva, as well as the perinæum as far back as the anus, was intensely inflamed, being uniformly excoriated and in parts in a condition of superficial ulceration. Being reminded of similar forms of dermatitis of these parts in adult life, he made inquiry which showed that micturition was too frequent and that the diapers stiffened on drying. Analysis of the urine subsequently made revealed a large percentage of sugar, specific gravity 1042.

The inflamed parts were rapidly improving under black wash and a protecting ointment.

KENTUCKY STATE MEDICAL SOCIETY.

Thirtieth Annual Meeting, held in Hustenville, June 24, 25 and 26, 1885.

WEDNESDAY, JUNE 24, FIRST DAY.

The Society was called to order by the President, Dr. Pinckney Thompson, of Henderson. Rev. J. R. Roger, of Hustenville, O., opened the session with prayer.

Col. Will. S. Hayes, of the *Louisville Courier-Journal*, made a happy Address of Welcome.

Dr. Edward Alcorn, of Hustenville, chairman of the Committee of Arrangements, also spoke some words of welcome.

Dr. Will. Bailey, of Louisville, from the Committee on the

PRACTICE OF MEDICINE.

spoke of the common practice on the part of the pharmacists of loading down the physicians office table with new pharmaceutical preparations. He thought this had become a common nuisance and should be abated. He had not the courage to uncork one tithe of what he received. He thought the physician should go before and ask the pharmacist to make new preparations to meet his wants; not that the pharmacist should form the remedies, and then urge them and their merits upon the physician. He recommended that new remedies be thoroughly tried by competent men in public institutions; then if found worthy, given to the general profession. He then began the discussion of the subject of cholera. All honor should be given to the brave men who are risking life and sacrificing comfort in the etiology of the disease. He thought the germ theory of disease to be the greatest question of the age. He thinks that from the history of cholera it must be much like dysentery, malarial fever, etc., due to climatic influences. In cholera improved sanitation should be the watchword.

Dr. Pinckney Thompson, of Henderson, then delivered the

PRESIDENT'S ADDRESS.

He congratulated the Society on their ability to meet together, and referred to those who had joined the great majority. He spoke of the profit to be gathered from their meetings, of all taking part in the work. A wise old Roman long since said "Men are at no time so like the gods as when they try to give health to other men." He who assumes the office of a physician takes up a solemn trust, a very grave responsibility; neglect or abuse must be most culpable. The physician he said was responsible for many of the crimes of the world, for to whom are the feeble constitutions and defective intellects more chargeable. To have a good brain we must have good blood. Whence can good blood, physiologically, come to him who has been born and bred in disregard to the laws of health? Wanting good blood the brain power fails, then the whole life, mental, moral and physical fails, and degradation results. He then considered the physical, mental and nervous degeneration of the American women, and "Overpressure at School." He compared the children of the cities with those of the country. Who of us have not seen, again and again, their country boys come to the town or city, and with their robust constitutions and heads full of brains, ride over their city or town competitors in whatever occupation they may follow? The women of this generation, he thought, had not

improved intellectually, physically, or otherwise over the preceding one. He should like to say that every girl is an angel and every woman a goddess, but if so they are very sick angels, and very feeble goddesses. He laid special stress in the difference of school life in the city and country, and its effect on the health of the children. The city schools he termed elevated slaughter houses. He spoke of the fearful increase of "Gynecological Sanataria." He closed with an appeal to the profession to correct these evils as far as possible, and to educate the people, especially mothers, in the proper care of their daughters.

THURSDAY, JUNE 25, SECOND DAY.

The Board of Censors of the Boyle County Medical Society reported the names of two gentlemen as not being members of the County Society. As no charges were made against the gentlemen other than this the matter was referred back to the local Society.

The Secretary, S. M. LETCHER, M. D., reported that the sum of $100 had been contributed to the Sim's Memorial Fund Received from dues $200, leaving $75.05 in the treasury.

A communication was received from the American Medical Association recommending that the State Society use its efforts to secure the passage of a bill authorizing the forming of a

STATE BOARD OF EXAMINERS AND LICENSERS.

Referred to a committee to report.

The subject of the

IMMIGRATION OF INSANE AND DEFECTIVE PAUPERS

into the United States from European and Asiatic countries was referred to a committee to report.

DR. J. M. MATTHEWS, of Louisville, read the report on the

PRACTICE OE MEDICINE.

He commenced with a feeling reference to the death of Dr. Gross. He then considered the operation of abdominal section and hydrochlorate of cocaine. He thought it an important question as to whether cocaine prevents repair. In some of his cases he thought it had. Its use in rectal diseases had not been followed by success in his hands. He had also used rhigolene as a local anæsthetic with success. He thought the great question to be, Can a physician after attending autopsies or infectious diseases disinfect himself and go to the operating room or lying-in chamber? Abdominal section for gun-shot wounds, pylorectomy and surgical treatment for empyema were carefully discussed.

DR. WM. CHEATHAM, of Louisville, thought the essayist was mistaken in his reference to cocaine preventing repair. Secondary hæmorrhage is more likely to occur. He thought it had a styptic action.

DR. M. F. COOMES, of Louisville, thought that if he had a gun-shot injury of the abdomen and the surgeon exhibited any hesitancy about operating he would say "go ahead." If cleanliness is observed in the abdomen repair will occur as quickly here as elsewhere. He reported a case of toxic symptoms following insufflation of two grains of Iodoform.

DR. E. WILLIAMS, of Cincinnati, discussed the subject of cocaine. He had arrived at the conclusion that the preparation of Merck was much superior to that of any American manufacturer. He had removed a small cystic tumor above the eye, using hypodermic injections of cocaine. Pain was not entirely abolished.

DR. AP. MORGAN VANCE, of Louisville, said that his experience was different from that of Dr. Williams. He had found it to work admirably in all cases even of tumors. He reported a number of cases.,

DR. W. O. ROBERTS, of Louisville, had used cocaine. His experience was not uniform; sometimes it does well, but it sometimes fails. In operations on the rectum it is of no use at all. He had used it in stricture of the urethra, and in prostatic and vesicle trouble, with good results.

DR. ARCHIBALD DIXON, of Henderson, reported on

LAPAROTOMY.

He reported a case of abdominal tumor believed to be fibroid, producing ascites. In four months after it came under his observation the tumor increased considerably. It continued to grow despite ergotine injections until it occupied the entire abdominal cavity. The operation for removal was successful.

DR. T. B. SCOTT, of Louisville, asked, How much may a physician expose himself to post-mortem examinations and infective cases and then attend obstetric cases?

DR. T. A. REAMY, of Cincinnati, at the request of the President, replied to this question. He referred in favorable terms to a paper read by Dr. Geo. F. French, of Minneapolis (see p. 5 of this issue of the JOURNAL), before the obstetrical section of the American Medical Association, "How Soon After Exposure to Sepsis may a Physician Resume Practice!" He would have it known that the germ of the dissecting room had been shown to be a different thing from that of disease. He stated how he had attended a case of puerperal fever in the morning, took a bath in warm water, then one in carbolized water as strong as he could bear it, then dressed himself. He said if an obstetrician was called on to attend a case, it was his duty, in attempting to disinfect himself, to change all his clothing clear down to his socks, take a shampoo, then bathe well in warm water, and then take a disinfecting bath. No man had a right to attend a case after attending an infected case unless he did that. While he might go in consultation, he was not fit to take charge of the case.

The Committee on nominations referred the following names:

OFFICERS FOR THE ENSUING YEAR.

President, J. P. Thomas, M. D., of Pembroke; Sr. Vice-President, O. D. Sharley, M. D., of Winchester; Jr. Vice-President, R. C. McChum, M. D., of Lebanon; Permanent Secretary, J. Steel Bailey, M. D., of Stamford; Treasurer, Edward Alcorn, M. D., of Stamford; Librarian, J. L. Taylor, M. D., of Warren Co.; Chairman of Committee of Arrangements, S. W. Willis, M. D., of Winchester. Winchester was chosen as the next place of meeting; time, the last Wednesday in June, 1886.

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

Diet of Nurses in Hospitals and Infirmaries—A Hæmostatic Powder—Professor Budin—Causes and Prevention of Cholera—The British Gynæcological Society.

At the sixth general meeting this season of the Hospital's Association, held at the rooms of the Social Science Association, a paper was read by Miss Louisa Twining, entitled "Thoughts on the Diet of Nurses in Hospitals and Infirmaries." She commenced, by stating her conviction, that the health of nurses in hospitals was not sufficiently considered in the arrangement of the dietary. Motives of economy might probably be pleaded, but no motive should prevail which seriously affected either the present or future health and strength of young women. The result could only be a speedy break-down, or a lingering debility. It would be granted by all, that the work of a nurse was not one conducive to appetite. Their avocation would indispose them to a hearty relish of their food. The apparently inevitable arrangement that the nurses dinner followed immediately upon that of the patient, was not the best preparation for their own meal. Far greater attention should be paid to providing suitable food for nurses, and that would be in the end true economy. Two things were named as capable of improvement, viz; making the dining rooms and tables a little more attractive, and also the extension of time allowed for meals, nurses so often hurrying over them, to the serious injury of their digestion, and the entire absence of any enjoyment of their food. More changes in the way of soup, lentils, fish, etc., were needed. The The substitution of more coffee or cocoa for frequent tea would be an improvement, and without adopting the vegetarian system, many useful hints might be obtained from it. In concluding, Miss Twining alluded to the question of stimulants, which was now being considered from all points of view. She objected to the allowance of money instead of beer, as the temptation was to get stimulants outside of a stronger character. She advocated the necessity of an officer being present at all meals to see them properly served, and in sufficient quantity. All the opinions she had obtained pointed to the same direction, viz: that greater variety was needed even more than quantity, and that the quantity of meat should be reduced in favor of more vegetable and farinaceous food; that greater attention should be paid to the cooking of the food, to the serving of the meals, and all the necessary accompaniments. As she was convinced that women were the best judges of such domestic matters, she ventured to call the attention of all lady guardians, especially, to these matters in infirmaries and work-houses, believing that no more important subject than this could claim their care and consideration.

At a recent meeting of the Academy of Medicine in Paris, Professor Bonafoux read a paper upon a powder which posesses great hæmostatic powers, and is capable, it is said, of arresting the bleeding of large arteries, so that it will prove serviceable in important surgical operations. This powder is composed of equal parts of colophony, carbon, and gum arabic. Experiments have been made with it on the brachial artery in man and on the smaller vessels, on the carotid of the horse and other vessels of the same animal, with marked success. It has always prevented consecutive hæmorrhage. The application can be lifted in the course of two days, when the vessels are found to be completely obliterated.

Professor Burdon Sanderson delivered a lecture at the Royal Institution on "Cholera, Its Causes and Prevention." Sir Frederick Abel presided. The Professor gave a short history of the manner in which at various periods the disease had spread, and said that those who resided at the West and North of London need have no fear as to the cholera if it fixed itself again in the east of the Metropolis, but he ventured to predict that if the disease intended to attack London this year, it would long ago have been on the march.

G. O. M.

DOMESTIC CORRESPONDENCE

NEW YORK LETTER.

(FROM OUR OWN CORRESPONDENT.)

Rupture of the Perineum—The Forceps and Chloroform in Labor.

The New York County Medical Association brought the year's work to a close in a very satisfactory manner at its last meeting before the summer vacation, which was held on the 15th, at the Carnegie Laboratory. To show that it was a pretty full evening's entertainment, as well as to indicate the quality of the same, the order of exercises is herewith appended:

I. 8 P.M. A few practical remarks on Rupture of the Perineum. By Frank H. Hamilton, M.D.

II. 8:30 P.M. Persistent Flatness over the Liver, as proof that Acute Diffuse Peritonitis is not associated with Intestinal or Gastric Perforation. By Austin Flint, M.D.

III. 8:45 P.M. Intussusception of the Intestines, with the report of a case. By Charles S. Wood, M.D.

IV. 9:10 P.M. A Method of Direct Local Treatment for Diseases in the Region of the Ileo-Cœcal Valve, and also for the Safe Removal of Impactions of the Intestines. By Charles A. Leale, M.D.

V. 9:20 P.M. Presentation of Specimens.

VI. Discussion of Papers in their numerical order.

VII. Executive Session.

In presenting his paper, the venerable surgeon who was first on the programme explained that he would be unable to read it himself for lack of voice, as he had been that day no less than nine hours on the witness-stand (in connection with the famous Hoyt will case), and he therefore called upon the corresponding secretary, Dr. John Shrady, to read it for him.

Many of the views expressed by Dr. Hamilton were somewhat at variance with those commonly entertained at the present day: though there was very

much sound common sense in the paper. It was unjust, he thought, to say that rupture of the perineum was an accident which could always, or even generally, be prevented by the skill of the accoucheur, since its occurrence was often due to conditions and circumstances over which the latter had no control. Thus, the perineum may be unusually deep in its antero-posterior diameter, or unusually thin and delicate, or less elastic in its texture than natural; the sacrum and coccyx may not have the proper curve to direct the head towards the pubes; the head itself may be large and unyielding; the uterine contractions may be too violent and rapid to allow the perineum time to become gradually stretched and accommodated to the head. There were, indeed, many causes, he said, which might determine this result, which were wholly beyond the power of the accoucheur to control.

The idea of "supporting the perineum," as commonly inculcated by obstetrical teachers, he believed could not be sustained either by any sound mechanical theory or by experience. If the intention was to delay the advance of the child, the intention was a good one, but this method of seeking to accomplish it was of no value. No resistance, or none which could ever be considered justifiable, applied to the perineum, could appreciably delay the advance of the child when the uterus was acting with its normal or with unusual vigor, and under no other circumstances would it be required. If the purpose of making pressure upon the perineum, however, was to carry the head forward toward the pubes, the suggestion had a meaning, and could be understood. This was certainly advisable whenever, from the lack of curve in the sacrum and coccyx, or from any other cause, the vertex did not take this direction; but these examples were rare and exceptional.

Sometimes, of course, the accoucheur was responsible for the accident of rupture, but his responsibility was likely to consist in what he might actually have done, rather than in what he might have omitted to do. Some modern authorities did not think the danger of rupture of the perineum was increased by the use of the forceps, if they were only used skilfully, but it certainly must increase the danger if they were used unskilfully, and when, in the hands of even the most skilful, the instrument was retained in position until the head had entirely escaped from the vulva. Nor did it appear to him that the argument in their defense was conclusive, even when the forceps were employed only to bring the head into the lower strait, and then withdrawn, leaving nature to complete the recovery. It was claimed that by this simple manœuvre the process of natural labor might often be greatly expedited, but this was the very thing which, according to his notions, it was generally most desirable to avoid, so that the perineum, as Meigs used to say, might "not be taken by surprise. In short, there was less danger to the perineum when the head did not come upon it forcibly and unexpectedly, and before the head itself had undergone the process of moulding and elongation. Dr. Hamilton, in referring to the fact that since the time when he commenced the practise of medicine the question of instrumental labor had undergone a complete revolution, said: "I was a pupil of Dewees, and was taught that the forceps was seldom required; but to-day the teaching is altogether different, and there are now many gynæcologists who count their instrumental labors by the thousands. A young man who was urging me to apply the forceps to his patient, but in which case the result proved that it was unnecessary, told me that a friend of his, a recent graduate of one of our city schools, and who was doing a large obstetrical practice in a neighboring town, assured him that he never put a woman to bed without forceps. I do not hold this young man's teachers responsible for his practice, but the fact illustrates what is now the drift of professional opinion."

As far as he was able to judge from the obstetrical experience of his early life and the surgical experience of his later life, grave perineal lesions were more common now than formerly, and this increase had been coincident with the increased use of forceps and of anæsthetics in labor. The effects of anæsthetics were by no means in all cases limited to the alleviation or abolition of pain when employed in the case of the parturient female. In most cases they exerted a positive influence upon the uterine contractions, and in this respect they were capricious; not infrequently increasing the frequency and strength of the contractions, and thus contributing to the production of a perineal rupture. In other cases he had seen the contractions temporarily suspended under their influence, and serious uterine inertia induced. "While there can be no doubt," he continued, "that the forceps and anæsthetics have been of incalculable service to parturient women, I have ä strong conviction that, since they have come into such common and almost universal use, they have done a great deal of harm. I believe that the time is not distant in the future when it will become apparent to all that we have in these matters progressed too rapidly, and possibly that our progress has been altogether in the wrong direction."

In case a perineal laceration involved any considerable portion of the perineum, extending nearly or quite to the outer surface of the sphincter ani, the closure of the rent was desirable, inasmuch as in a certain proportion of cases it was followed by a relaxation and falling of the vaginal walls, with a consequent displacement of the uterus; though it had often happened to him to see women in whom the rent had extended through the entire perineum, who had after the lapse of many years suffered no inconvenience from this source. The occurrence of a deficient perineum and of prolapsus uteri did not always stand in the relation of cause and effect. The perineum in its most perfect condition, and when the uterus occupied its normal position, gave no direct support to the latter, and the uterus might be made to descend from many causes, whether the perineum were sound or not. The absence of the perineum, when the vagina and uterus were in their normal conditions, could only influence the descent of the uterus by first inducing atony of the muscular fibres of the vagina, with congestion and prolapse of the vaginal

walls, by which not only the feeble and indirect support which the perineum gave to the uterus was removed, but the vaginal walls became a dead weight to drag the uterus downward.

Dr. Hamilton said he could not agree with some modern gynæcologists as to the advisability of the immediate or primary operation. The parts have suffered such a degree of stretching and contusion as to render the occurrence of inflammatory reaction, if not of sloughing, almost inevitable; the lochial discharges will make it impossible to keep the parts clean; the operation itself inflicts a severe injury when the condition of the patient is already critical from other causes; and, finally, because under judicious management the rent frequently becomes partially and sufficiently closed spontaneously.

It was useless to expect union by first intention, as a rule, and, therefore, while the parts should not be needlessly or forcibly drawn asunder, they might be carefully exposed to view each day and made clean by ablution, the urine in the meanwhile being always drawn by a flexible catheter. In the secondary operation he prefers the old-fashioned one with the quill suture, with the exception that he uses sections of a rather large-sized flexible bougie in place of quills. He stated that he does not find the wire suture so easy to introduce or to remove as the silk, and that he has not found it, where the perineum alone is torn, to possess advantages in any other respect. If, however, the rent or loss of structure involves any considerable portion of the retro-vaginal septum, he would recommend, so far at least as the rectal fissure is concerned, the wire suture, either with or without Bozeman's clamps.

In a few extemporaneous remarks which he made after the paper had been read, Dr. Hamilton criticised Dr. Fordyce Barker's views in regard to the action of chloroform during labor. Dr. Barker claimed, he said, that the use of this anæsthetic prevented laceration of the perineum, explaining the action in two ways. In the first place, he said that it relaxed the muscular fibres of the sphincter vaginæ. To him, however, this appeared to be a physical error, not to say absurdity; for when the sphincter was distended to such an enormous degree as was the case when the head was pressing upon the perineum, it was impossible for any constitutional measure, such as the administration of chloroform, to have any effect in relaxing the tension. The second explanation was that the uterine action was somewhat suspended by the chloroform, and to that extent relieved the perineum; and Dr. Hamilton remarked that this was satisfactory as far as it went, but when the head advanced, this influence would have no effect. On the whole, therefore, he regarded the use of chloroform as an unnatural interference with labor.

The veteran and distinguished obstetrician, Dr. Isaac E. Taylor, said that many of the views expressed by Dr. Hamilton, were in consonance with his own, although he would take issue with him on some of the points of the paper. A great variety of methods had been proposed for the management of the perineum during labor, but, as a rule, they were written clearly, philosophical, or physiological. The correct plan was, he thought, to place the fingers entirely back of the perineum, on the space between the rectum and the coccyx. In this way direct pressure could be made upon the child's forehead, and the perineum could be saved by delivering the head between the pains. Placing the fingers in this situation also enables the accoucheur to prevent rupture of the perineum in occipito-posterior positions, by changing the latter to face presentations. The shoulders, however, he thought, were much more liable to produce laceration than the head, and great care, therefore, should always be taken in their delivery. In regard to the use of anæsthetics, he said he made it a practice to go to his obstetric cases provided with both chloroform and ether. He had long since noticed that in a certain proportion of cases chloroform had the effect of putting a stop to uterine contractions, and in these instances he had found that ether almost always had a very happy effect in bringing on the pains again. If one of these agents did not answer, therefore, he would try the other, and he generally found that its action would be satisfactory. Like Dr. Hamilton, he disapproved of the immediate operation, and one reason was that not infrequently the mere effects of labor produced a paresis of the perineum, which gave it an appearance closely resembling a laceration, but which afterward entirely passed away, leaving the part intact.

At the meeting of the Academy of Medicine, June 18th, Dr. H. W. Mitchell also read a paper on laceration of the perineum. In it he gave a report of forty cases upon which he had operated during the past fifteen months, and in all of them he obtained union by first intention. In one of the cases the patient was six months pregnant at the time, and the operation was done at her urgent request, on account of the discomfort which she suffered from the rupture. She then went on to full term without any unpleasant symptoms, and the new perineum bore the strain of the labor in an entirely satisfactory manner. P. B. P.

PRIMARY MALIGNANT DISEASE OF THE KIDNEYS.

EDITOR JOURNAL AMERICAN MEDICAL ASSOCIATION:

Sir:—In my paper on "Primary Malignant Disease of the Kidneys" published in your esteemed JOURNAL, I said, under the head of "Prognosis": "The inferior vena cava being filled with clots in such a great proportion of cases, I am surprised not to find any deaths from embolic processes." After the publication of the paper, Prof. W. Osler, of the University of Pennsylvania, wrote me that one of his cases referred to by me (p. 620, 2d column, line 11 from top) died from embolism of the tricuspid orifice, a sarcomatous thrombus having become dislodged from the renal vein.

In the table I also forgot to state that case 16 was one of sarcoma. By inserting these additions in the next issue of the JOURNAL, you will confer a great favor on Yours truly,

GEO. MINGES.

Dubuque, June 25, 1885.

BOOK REVIEWS.

THE STUDENT'S GUIDE TO MEDICAL JURISPRUDENCE. By JOHN ABERCROMBIE, M. D. Cantab., M. R. C. P. Lecturer on Forensic Medicine at the Charing Cross Hospital Medical School; Corresponding Member of the Medico-legal Society of New York, etc. Sm. 8vo., pp. xii, 381. Philadelphia: P. Blakiston, Son & Co., 1885. Chicago: W. T. Keener.

The writer tells us in his preface, that this little book was written with the endeavor to condense and group together, in a readily assimilable form, the chief facts belonging to the important subject of Medical Jurisprudence; and that it is not addressed to those who have the leisure to study such standard works as those of Taylor, Tidy, Wharton, Stillé and others. Whatever may have been the original intention of the author, he has succeeded in bringing together a marvelous array of useful facts, within the small compass of less than four hundred small pages; and to facilitate reference and study, very full and convenient marginal notes have been added. After careful examination of the book, we have failed to find mention of one subject only, that of dynamite injuries; which, in view of the recent interest of the British public in the subject, should have received some notice. Under the head of gun-shot wounds, the author has overlooked one of the most interesting cases on record; one reported by Mr. Francis Ogston about a year and one-half ago, of suicide by a pistol-shot, there being no external wound; the barrel of the revolver was placed in the mouth, and the bullet entering the foraman magnum glanced from the occipital bone to the frontal, and thence back to the occipital, where it was arrested.

In dealing with the subject of poisons, all reference to the methods by which they may be detected in organic matters are omitted; which is very proper. Analyses are seldom, and never should be made except by competent chemists, and the greater number of works on medical jurisprudence contain just enough information to get the pseudo-analyst into a tangle. Taken altogether, Dr. Abercrombie has given us a very useful little book, and one which will be appreciated by those who wish to gain much information by a minimum amount of reading.

MISCELLANEOUS.

VINDICATED.—Recently the secular papers of Washington gave publicity to charges of mismanagement against Dr. P. J. Murphy as physician to the Columbia Hospital, of that city. We are glad to notice in a recent number of the *Washington Star* the following decision of the Board of Directors:

"*Resolved*, That we, the Directors of the Columbia Hospital, in committee of the whole, having granted full and ample hearing to statements criticising the officers and management of the institution, accord to Dr. P. J. Murphy, the surgeon in charge, personally and in his general management, our continued confidence."

HONORS.—At the recent commencement of the Wooster College, Ohio, the degree of LL.D. was conferred upon Dr. H. Z. Gill, of Cleveland, formerly of this State.

CHOLERA PRECAUTIONS IN RUSSIA.—In view of the danger from cholera the department of the Caucasus has notified the Russian Government that all railways will be furnished with cars containing disinfectants and medicines (flying pharmacies), with corps of medical officers.

THE INDEX MEDICUS.—PROFESSOR HEISCHL, of Vienna, has issued a circular calling upon German medical men to support this invaluable periodical; and the *St. Petersburger Medicinische Wochenschrift* says that medical men should see to it that it does not fail for want of support.

PROFESSOR RICHARD VOLKMANN, of Halle, has been raised to the order of nobility.

THE MIND-CURE.—The *London Times* intimates that Boston is responsible for the birth of this latest monstrosity, and says: "The saying that extremes meet is never more true than when one of the extremes is transcendental rubbish of the kind that seems to have captivated the good people of Boston." And now comes the announcement that an *International Faith-Cure Conference* was recently held in London. Extremes have met—but not in Boston.

THE NEW YORK STATE BOARD OF HEALTH.—The Governor of New York has greatly interfered with the proper working of the Board by vetoing the bill appropriating $15,000 to its use.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 20, 1885, TO JUNE 26, 1885.

Major Albert Hartsuff, Surgeon, assigned to duty at Ft. Hamilton, N. Y. H. (S. O. 133, Dept. East, June 24, 1885.)

Major J. V. D. Middleton, Surgeon, granted one month's leave, with permission to apply for 15 days' extension, to take effect about 15th proximo. (S. O. 88, Dept. Mo., June 19, 1885.)

Captain Blair D. Taylor, Assistant Surgeon, ordered from Dept. Texas to Dept East.

Captain Wm. F. Carter, Assistant Surgeon, ordered from Department East to Dept. Texas. (S. O. 141, A. G. O., June 20, 1885.)

Captain Wm. B. Davis, Assistant Surgeon, leave of absence extended three months. (S. O. 142, A. G. O., June 23, 1885.)

First Lieutenant R. G. Ebert, Assistant Surgeon, granted leave of absence for one month, to take effect about July 5. (S. O. 97, Dept. Col., June 17, 1885.)

First Lieutenant R. L. Robertson, Assistant Surgeon, now on leave of absence, is directed to report in person by July 7, 1885, to commanding officer, Columbus Bks., Ohio, to accompany detachment of recruits to Dept. Texas. On completion of this duty, to rejoin his proper station. S. O. 143, A. G. O., June 24, 1885.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING JUNE 27, 1885.

Bransford, John F., commissioned as Surgeon on active list, June 16, 1885.

Ross, J. W., Surgeon, detached from Naval Laboratory, June 30, 1885, and waiting orders.